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ABSTRACT

Selected authors and titles include: "Radical Adult Education" (Armstrong); "Learning Liberation: A Comparative Analysis of Feminist Consciousness Raising and Freire's Conscientization Method" (Butterwick); "The Aging Worker's Potential and Training Practices" (Chene); "The Interaction of Teaching Style and Learning Style on Traditional and Nontraditional Learners" (Conti); "Everett Dean Martin" (Day); "Adult Learning in Volunteer Settings" (Fiset); "Anomia and Life Satisfaction as a Basis for Understanding Participation in Education-Related Activities by Older Adults" (Fisher); "An Analysis of Research Contributions to the Adult Basic Education Literature 1976-1986" (Fisher); "Professionalization and Professional Certification" (Gilley); "Generativity in Middle Adulthood" (Hardin); "The Elegant Arts amid the Coarser Plants of Daily Necessity: A Retrospective View of a Women's Study Club 1885-1957" (Hugo); "A Citation Analysis of 'Adult Education Quarterly'" (Kavanagh); "The Use of a Delphi Technique in the Forecasting of Adult Learner Trends in Higher Education" (Lambert); "Locus of Control and Values of Adult Learners in Schools of Dentistry, Business, and Education" (Londoner); "Youthful High School Noncompleters" (Martin); "Retraining after Job Loss as a Function of Life Stage" (Merriam); "The University's Role in Continuing Professional Education in the United Kingdom and North America" (Moser); "Mirrors and Mentors: Adult Educators and Learners in Canadian Fiction" (Munro); "The University of Wyoming's Role in the Historical Development of Adult Education in Wyoming, 1886-1918" (Nel); "The Effect of Educational Strategies on Employees' Health" (Ostwald); "Lindeman, Knowles, and American Individualism" (Podeschi); "The Resisters: An Analysis of Non-Participation in Adult Basic Education" (Quigley); "'The Workers Are Finding a Voice': Empowerment among the Unemployed in the Great Depression" (Schulman); "Yellowstone National Park and the Education of Adults" (Sharp); "An

Analysis of the Cognitive Profiles of Selected University Adult Students" (Sisco); "The Classroom Learning Scale: A Criterion Measure of the Oddi Continuing Learning Inventory" (Six); "Learning Patterns of Pregnant Women" (Strychar); "Mentoring and Achievement Motivation as Predictors of Career Success" (Willbur); "Incidental Learning at Work" (Wiswell); "An Examination of Cognitive Restructuring in an Adult Continuing Education Workshop" (Young); "Mental Abilities Measurement and the Minority Adult" (Martinez); "Electronic Networking and the Adult Education Researcher" (Hiemstra); and "Selected Demographic Factors as Potential Indicators of Persistence of Adult Community College Students" (North). (YLB)

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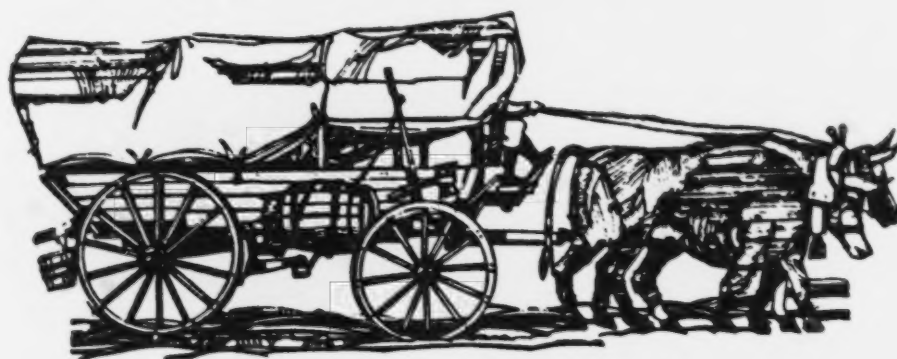
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OF THE
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ADULT EDUCATION RESEARCH CONFERENCE

MAY 21-23, 1987

UNIVERSITY OF WYOMING
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THE USE OF EXPLORATORY DATA ANALYSIS IN ADULT EDUCATION RESEARCH

Lola J. Aagaard, University of Oklahoma

Abstract: Adult education researchers could benefit from an acquaintance with Exploratory Data Analysis (EDA), particularly median smoothing. Median smoothing is an EDA technique, used with sequential or time series data, which relies on the comparison of each value with a few adjacent values, and alteration of each as suggested by its neighbors. This results in a much smoother curve than the initial plot of the raw data, and may reveal some of the very relationships which are of interest to the researcher, but often are masked by traditional statistical analysis.

Introduction

Adult education research is rife with studies of an exploratory nature. This is well and good, for theory generation and confirmatory analysis feed on exploration. However, most of the exploratory data are being analyzed with the traditional confirmatory techniques and mind-set, which presents a two-fold problem:

1. Confirmatory techniques are employed at certain alpha levels to control the probability of Type I error. When used repeatedly in the same study (and 20 or more correlations are often done), the alpha level increases with each test of significance and essentially no Type I error protection is provided for the study as a whole.

2. The traditional approach to sequential or time series data is to run correlations and/or fit linear regressions. More sophisticated researchers may attempt non-linear regressions by moving up the polynomial ladder ("Well, let's try quadratic. Rats! It isn't quadratic.... Let's try cubic!"); others may simply graph the raw data. Often, the data are not fit well by any certain polynomial, and a graph of the raw data is such a hodge-podge that simply eyeing it is not helpful.

What is needed to solve this problem is, first of all, an admission that these studies really are exploratory and, as such, are not bound by the conventions associated with confirmatory research. This allows the researcher to relax about Type I error, plus any other restrictive assumptions, since no generalizations are going to be made from the data. The goal becomes theory generation, to be tested in a later confirmatory inferential study. This is, admittedly, difficult to do for researchers brought up in the traditional mode, and it requires some ethical backbone to resist making generalizations immediately, but it is a necessary step.

Secondly, some other techniques are needed which will reveal the underlying structure in the data, and maybe force the researcher to notice what he never expected to see (Tukey, p. vi). This is where Exploratory Data Analysis (EDA), and in particular median smoothing, can help.

EDA and Median Smoothing

EDA is a collection of techniques for looking at data more effectively, and finding what they seem to say. This approach is concerned with appearances, not confirmation. The father of EDA is undeniably John W. Tukey, although some of the techniques have been in limited use for over a century (Tukey, p. 234).

Median smoothing is a particularly useful EDA procedure for revealing the underlying structure of sequential data which seem confusing in their raw form. As the process of regression can be expressed as

data = fit PLUS residual,

so can median smoothing be written as

data = smooth PLUS rough.

Smoothing relies on the comparison for each value with a few adjacent values, and altering it as suggested by its neighbors. The continuance of this process through several steps results in a much smoother curve than the initial plot of the raw data. The goal of median smoothing is a plot of the general trend of the data which is free of zig-zags and single peaks or valleys.

An example from Tukey (p. 270-272) is instructive even without graphing anything. Suppose we are given a sequence of numbers like this:

4, 7, 9, 3, 4, 11, 12, 1304, 10, 15, 12, 13, 17, 20, 24

It is immediately obvious that there is an outlier in the data. It may be real and very important, or it may be an error, but whatever it is, it is interrupting what otherwise could be a relatively smooth curve increasing from near 5 to near 20.

Median smoothing involves taking running or sliding medians of sequential blocks of data. For this example we will take running medians of three values at a time. The first three values (4, 7, 9) have a median of 7. The second three values (7, 9, 3) have a median of 7 also. Progressing similarly, we get the following sequence of medians:

<u>Data</u>	<u>Medians</u>
4	
7	7
9	7
3	4
4	4
11	11
12	12
1304	12
10	15
15	12
12	13
13	13
17	17
20	20
24	

Repeating this same smoothing technique with the first medians results in:

<u>Data</u>	<u>Meds. 1</u>	<u>Meds. 2</u>
4		
7	7	
9	7	7
3	4	4
4	4	4
11	11	11
12	12	12
1304	12	12
10	15	12
15	12	13
12	13	13
13	13	13
17	17	17
20	20	
24		

Nothing more will happen if we smooth by 3's again, since the final smoothed sequence is composed of only steady upward or downward bits and flat tops or bottoms at least two numbers in length. There are some specific ways for dealing with the missing end values, but for the purposes of this paper the raw end values can just simply be copied on to the sequence of smoothed medians, giving:

4, 7, 7, 4, 4, 11, 12, 12, 12, 13, 13, 13, 17, 20, 24.

A graph of this final sequence would reveal the general pattern without distracting the eye with the peaks and valleys which would appear in a plot of the raw data. Depending on the amount of data, median smoothing can be done by threes, fives, sevens or any other odd number.

Adult Education Example

An example, drawn from real data collected from a nontraditional liberal arts program (Langenbach and Korhonen, in press) is here employed to demonstrate the use of smoothing in actual research. The data of interest (N=439) are the ages of the students entering the program and their scores on required entrance examinations in the areas of natural sciences (NS), social sciences (SS), and humanities (HS). It is the feeling of many adult educators that performance on tests such as these declines with the increasing age of the student. Generally correlations are run to test this hypothesis, and the ones of interest from these data are as follows:

	NS	SS	HS
AGE	-.213	-.063	-.015

Because of the large sample size, the correlation of AGE and NS is significant at $p=.001$. The scatterplots of the raw data (overlaid due to space constraints) are shown in Figure 1, and are very noisy and inconclusive.

Traditional data analysis would end here, and the results would be reported. However, repeated smoothing (by threes) of the median score for each year of age reveals some interesting structure in the data (Figure 2 - no raw end point values were plotted). NS scores were 60-70 points higher than both NS and SS scores in the early 20's age range, but dropped down to roughly equal from the 30's through about age 50. After age 50, NS scores took another drop, while SS and HS scores either rose or stayed the same. It appears that the significant negative correlation between age and NS score is based entirely on the 176 subjects who are under 30 or over 50 years of age. Indeed, running a correlation between age and NS score just on those subjects aged 31-50 results in $r=-.03$. Whether this would occur in another sample is a question which cannot be answered from this study, but it appears to be the case with these data.

More sophisticated procedures are available which would further smooth the peaks and valleys in the data, but they are beyond the scope of this paper, which was simply intended to acquaint adult education researchers with an alternative way of exploring data. Those wishing more detailed information are referred to Tukey (1977).

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- Langenbach, M., & Korhonen, L. (in press). Persisters and nonpersisters in a graduate level, non-traditional liberal education program. Adult Education Quarterly.
- Tukey, J. W. (1977). Exploratory data analysis. Reading, Mass.: Addison-Wesley Publishing Company.

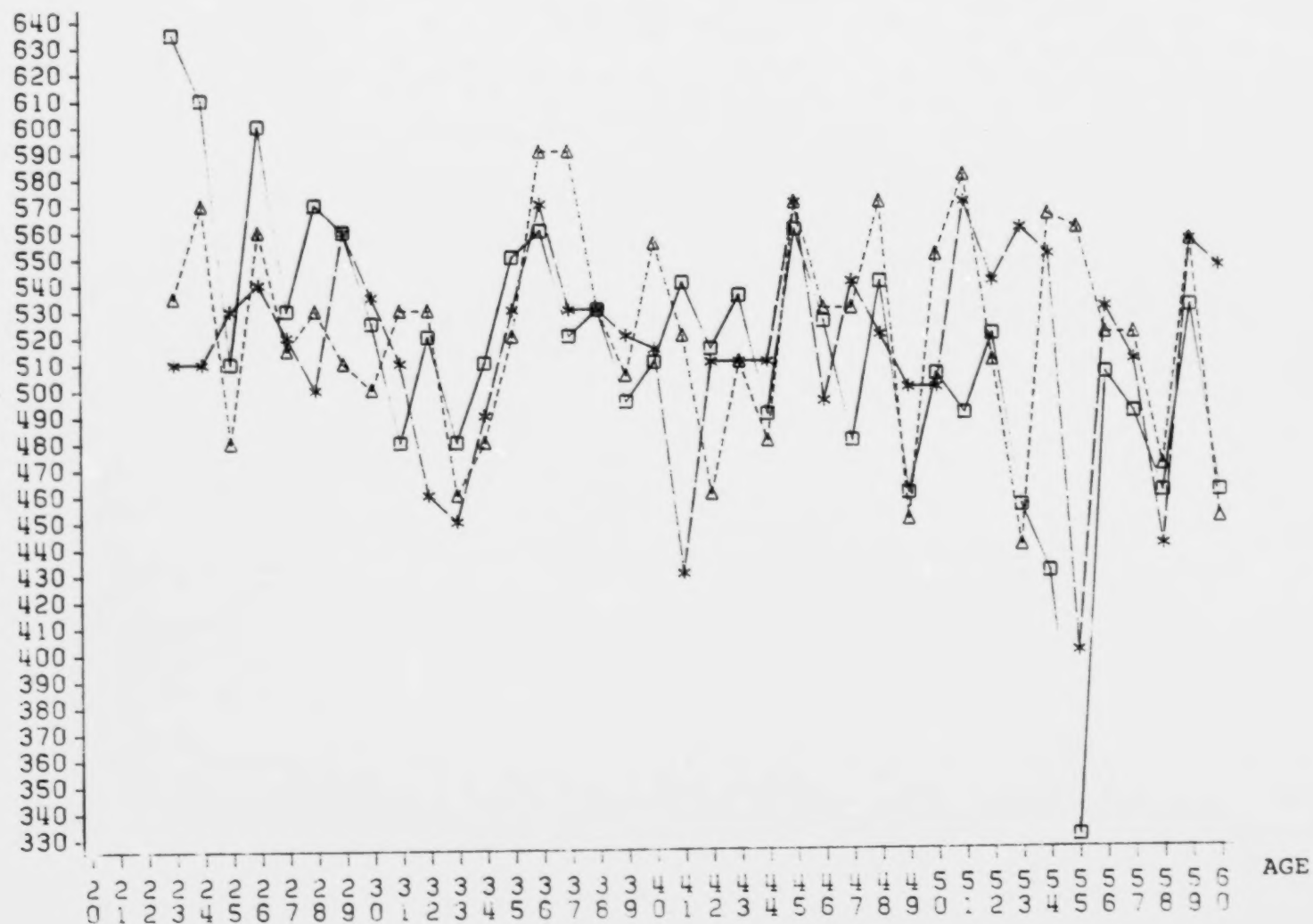
FIGURE 1

RAW DATA

□ = NS

△ = SS

* = HS



-5-

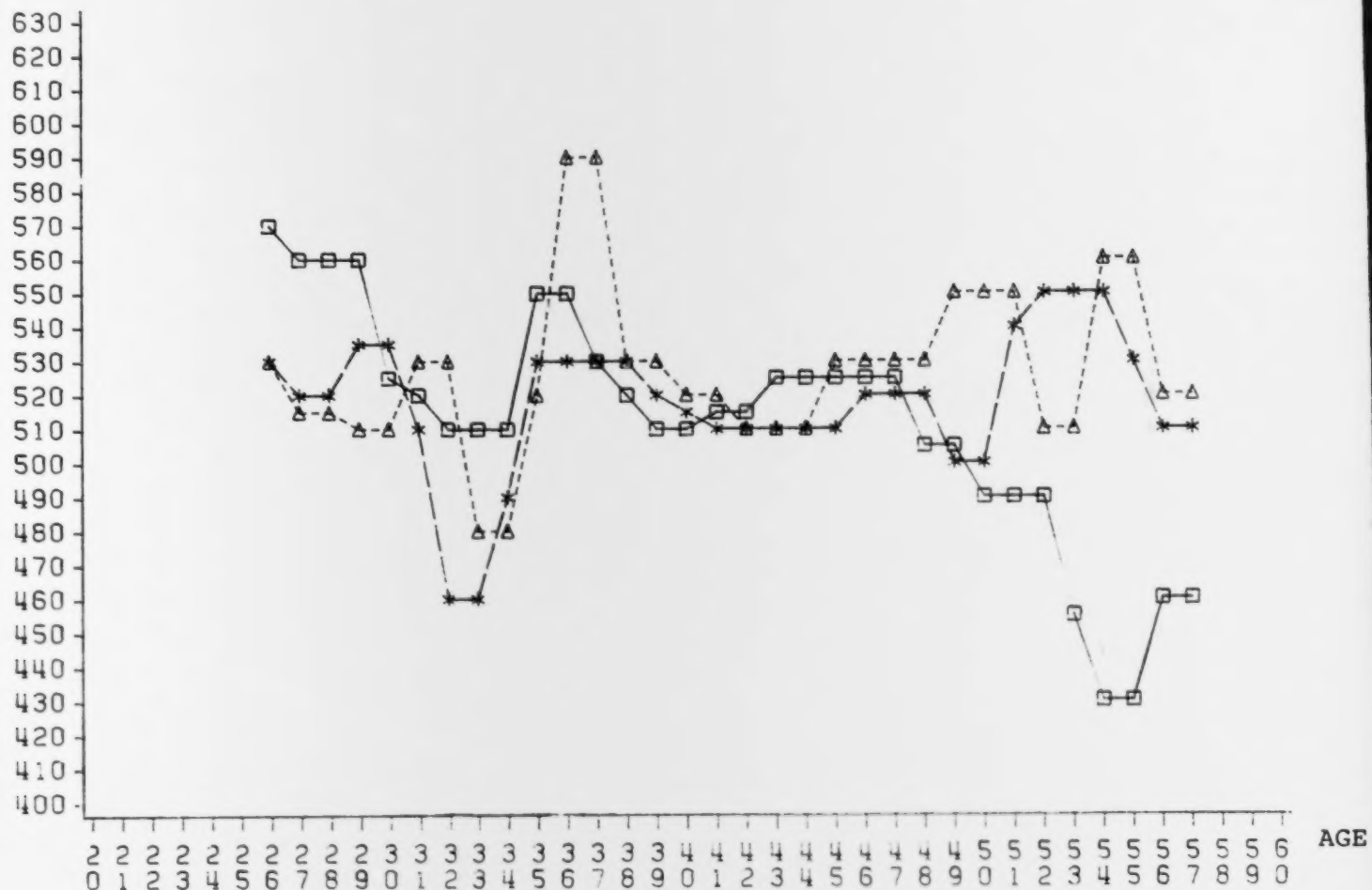
FIGURE 2

SMOOTHED DATA

□ = NS

△ = SS

* = HS



RADICAL ADULT EDUCATION: THEORY AND PRACTICE IN EUROPE AND AMERICA

Paul F. Armstrong, Project Evaluation Officer, Further Education Unit, London, United Kingdom.

ABSTRACT

This is a conceptual paper which seeks to elucidate the concept of radicalism and its use in adult education literature in Europe and the United States, in order to demythologize and expose the ambiguity of the concept, and to argue for a more consistent, politically informed praxis in adult education.

THE AMBIGUITY OF RADICALISM

Radicalism is an ambiguous concept, and its use in adult education in Europe and America reflects this ambiguity, which has contributed to a number of myths about the potential of adult education in its avowed objective of social change. Dictionary definitions of radicalism reflect the variety of meanings it might have, from 'going to the root or origin, touching or acting upon what is essential and fundamental' (Oxford English Dictionary), contrasting with that of 'something marked by a considerable departure from the usual or traditional; tending or disposed to make extreme changes in existing views, habits, conditions, or institutions, or constituting a political group associated with views, practices, and policies of extreme changes', to 'advocating extreme measures to retain or restore a political state of affairs' (both from Webster's New Collegiate Dictionary). Already we can detect at least three meanings of radicalism, which roughly correspond to three political perspectives: (1) Liberal-Democratic radicalism; (2) the radical Left; and (3) the radical Right. That we can differentiate such meanings and link them to political ideologies is reinforced by Barrow in Radical Education, in which he critically examines the ideas of such diverse thinkers and writers as Rousseau, A.S. Neill, Illich and Postman and Weingartner - all of whom can be considered 'radical', since what he means by this is

"one who wants change that involves going to the root of the matter as opposed to one who wants no change at all, or one who wants superficial change. That is all, and that is precisely what I mean by a radical. For many people the word conveys rather more than that. It is often associated with left-wing political views, and consequently for some people the word has strong emotive overtones, whether favourable or unfavourable. But then the matter is further complicated by the currency of such phrases as 'the radical Right', which usage puts all the emphasis on the idea of extreme views of whatever kind." (Barrow, 1978; p.1)

For Barrow, radicalism involves none of these associations, and its meaning lies in the first of our three varieties, the Liberal-Democratic, referring to 'root-and-branch' change: 'a radical proposal is one that strikes to the heart or foundations of the matter' - a change that is 'evaluatively neutral' for 'striking to the heart of the matter and insisting on fundamental change is, in itself, neither good nor bad. Much must depend on what we propose should be changed in this way, and when and why we do so'(ibid). I would contend that much of what is

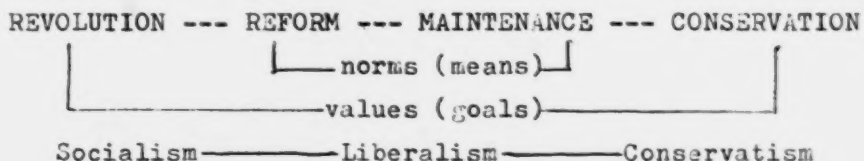
written in European and American literature about radicalism, especially that relating to adult education, is of this variety. It is beyond the scope of this brief paper to justify this claim in detail. Elsewhere I have reviewed the history of radicalism in British adult education, encompassing the Chartists, the Co-operative Union, the London Working Men's College, Ruskin College, the Workers' Educational Association, the Plebs League and the Central Labour College, within the period 1850 to 1930, reaching pessimistic conclusions on the failure of the socialist movement to bring about radical social change, and the failure of adult education to significantly make progress towards such change. This, I argue, was primarily due to a misconceived notion of radicalism, one that fitted the dominant ideology of the time. There were a few examples of what might be considered genuine attempts at revolutionary social change, but their efforts were based on a rather crude and unsophisticated theoretical basis (Armstrong, forthcoming).

This is not to deny that such ideas and practices were not deemed radical at the time, but we have to remember that radicalism is a relative, not an absolute concept. At a time of conservative, or reactionary domination, any political views to the left of this position may be considered radical or subversive, when in reality such views are rarely more than Liberal. In a paper delivered at last year's AERC conference, Hellyer provided such an example with his discussion of revolutionary radicalism in the US in 1919-1920. The reactionary Lusk Committee, caught up in a fervor of nationalism and anti-communism, considered any adult education program linked to social integration, social responsibility or social change objectives as 'subversive':

".. it made little difference if the men and women involved in counter-hegemonic education were called leftists, unionists, pacifists, muckrakers, socialists or radicals. They were all lumped together as subversives. All, no matter what the label, were somehow dedicated to the 'growth of the radical revolutionary movement due largely to the effect of propaganda'." (Hellyer, 1986; p.136)

One suspects that a careful analysis of the aims and objectives of such adult education programs would reveal them to be, at most, examples of Liberal reformism rather than subversive or revolutionary, for as Hellyer observes, even the hallmark of American 'liberal' education was not safe from the Lusk Committee's attack (ibid; p.139).

It might be helpful to reassess the attempt made by Thomas and Harries-Jenkins (1975) to propose a continuum with which to analyse the role of adult education in the process of social change and/or the maintenance of the existing order. The continuum ranges from conservation on the extreme right, through maintenance and reform in the middle ranges, to revolution on the left. Their continuum is based on norms (means) and values (goals), and would seem to correspond to the political continuum from right- to left-wing views:



There are a number of analytical problems involved in the use of such unilinear models to try to reflect social reality, not least that they fail to capture both the relativity and the dynamic nature of political perspectives, and present a false dichotomy. More important for the purposes of this paper is that Thomas and Harries-Jenkins, and subsequently Thomas (1983), fail to come up with any convincing examples of revolutionary adult education which fit their 'value-oriented interpretation of the function of adult education', derived essentially from the conflict model of society. Whilst they are able to cite many examples of adult education programs with objectives in the reform-maintenance section of the continuum, and even a few at the conservation end, there are very few instances of radical adult education to be found, not only in Europe and America, but across the world.

What about Illich and Freire? It is beyond the scope of this paper to analyse their work in detail. Although they should be treated separately (Allman, forthcoming; Youngman, 1986), it is possible to argue that they are both Liberal reformists. This is how Dale presents this argument:

"'Liberal' alternatives are taken to be those which aim to improve the process and outcomes of schooling, particularly at the level of individual experience of, and benefit from, education. Liberal alternatives set out to achieve these ends by means of reforms within the present system that leave the basic structure unaltered. 'Radical' reformers frequently appear to have rather similar objectives in mind, but they differ from liberal reformers in that they do not believe that reforms are possible without major changes to the structure as well as the process of schooling. In short, the liberal alternatives are directed towards making the existing system work more productively and more humanely, while the radical alternatives aim at the replacement of the existing system of education, and consider that the possibilities for worthwhile and effective improvement within the present system are almost totally absent." (Dale, 1977; p.6)

If we take Freire and Illich as examples of radical alternatives, we find that their programs involve

"not a creation of a new system but the return to earlier, less 'corporate' forms of capitalism ... The major irony ... is that Illich's alternatives themselves stem from a laissez-faire liberal tradition. Illich seeks to recapture and to reinstate in more propitious times the qualities of 'genuine' interpersonal change uncorrupted by the dehumanizing demands of modern society ..." (ibid; pp 6,37)

To be fair to Freire, his work has shifted over the years, and more recent writings and practices do offer 'an educational approach which strikes at the heart of the relations which sustains ideology' (Allman, forthcoming), but as Youngman concludes:

"... from a Marxist perspective, Freire's work as a whole does not provide a satisfactory basis for adult education for socialism. His work is eclectic and lacks the 'imperious coherence' that he himself demands of revolutionaries." (Youngman, 1986; pp 190-191)

So what about other writers, organizations and programs, such as Lindemann, Highlander, the Danish Folk High Schools, and so on, that could be characterized as radical adult education? Again, it is beyond the scope of this paper to provide the detailed critical analysis that would be necessary to demonstrate that such people, organizations and programs are indeed radical. The Danish Folk High Schools provide an interesting example, and one which Thomas (1983) uses as an illustration of a form of radical adult education, for they were essentially brought into being as agents of resistance of German imperialism and cultural invasion, and for the restoration of Danish culture, the rejuvenation of Danish pride in a non-sectarian way. If the implicit, if not the explicit, objective of the Folk High Schools was to protect the Danish identity, to act as 'a spiritual fortification against the Germans', then rather than seeing them as revolutionary, they may be placed at the other end of the continuum, the conservation end. Alternatively, if they are to be characterized as radical, it may be in the sense of 'radical Right'. Who would doubt that the policies of the Reagan and Thatcher administrations have not been in some sense of the word, radical? The task of the radical Right government in Britain has been to restore 'a real sense of order in social life'; in other words, to 'restore a political state of affairs'. The writings of the Conservative think-tank, the Centre for Policy Studies, claim to be 'radical and progressive', and yet the policy implications for the dismantling of the welfare state, the privatization of health care, and the re-introduction of selectivity in education, and so on, are reactionary.

There is a very thin line between radicalism on the Right and on the Left. As Jackson has observed, 'the right target has sometimes been hit by reactionaries for the wrong reasons' (Jackson, 1980; p.11). In adult education, the fact that similar sentiments are expressed from different, even competing world views, can lead to some interesting ironies or paradoxes. For example, the critique of Liberal adult education in Britain initially emanated from the Left, but in recent years, the demand for cost-effectiveness, profit-making, economic relevance, and so on, has led to a significant attack on Liberal adult education from the Right. Thus, the Left critique is faced with either aligning itself with the Right in a concerted attack on the centre, or alternatively coming to the defense of the Liberal perspective where previously it was critical. An illustration of this in Britain has been the consistent attack on the extra-mural tutorial class from a socialist direction as bourgeois and elitist, until the monetarist policy-makers launched their attack, albeit for different reasons. Ever since, socialists have now come to the support of the tutorial class (see Taylor, Rockhill and Fieldhouse, 1986). But it is precisely these emergent paradoxes and contradictions that adult educators must come to terms with in a theoretically consistent way which informs and guides practical action.

THE ART OF PARADOX AND CONTRADICTION

It should be becoming clear that the analysis of radical adult education is fraught with paradoxes and contradictions. It is the recognition of these contradictions, their analysis and eventual resolution that constitutes the task of the radical Left. The notion of 'contradiction' is interesting in itself, not least because it is at the core of Marxist theory of social change. Without going into this theory here, suffice it to say that the radical potential of Marxism rests upon Marx's insight that right at the heart of capitalist production there lies a fundamental contradiction related to two features: the social nature of

production and the private basis of accumulation; the contradiction between 'use value' and 'exchange value'. There is, of course, debate among Marxists as to the inevitability of structural contradictions within capitalism leading to its downfall. The more deterministic view might see the revolutionary overthrow of capitalism as the inevitable outcome of the structural contradictions between the forces and relations of production. Others would say that the existence of contradictions within capitalism generates no historical necessity for such contradictions to be resolved (Giddens, 1971; p.242). The significance of this for radical adult educators is that if they subscribe to a deterministic view, the implication of this for practical action is that since the logic of capitalism contains the seeds of its own destruction, we only need do nothing - 'radical non-intervention' - except wait for the inevitable social change to occur. An example of this particular kind of analysis is provided by Bowles and Gintis (1976). However, if we believe that such outcomes are not historically inevitable without some practical action, as for example Gramsci argued, then adult educators, along with other agencies such as social and community workers, may need to engage in praxis to firstly identify, and secondly resolve contradictions and paradoxes inherent in the process of revolutionary social change.

For those of us who believe that adult education should and does have a role to play in socialist transformation, we have to recognise a number of things. Firstly, adult education cannot bring about social transformation by itself; it can only contribute to the process as part of a mass socialist movement. Secondly, there are at least two distinct phases of social transformation, and the contradictions inherent in the process will be different in each phase. The preliminary phase is adult education for socialism, which has the objective of the development of a critical socialist consciousness of the mass of the population, which for writers such as Gramsci and Freire is a clear task for education, even though at the same time there is a danger of 'domestication', as education serves to reproduce the dominant ideology and acts as an agency of social control as part of the ideological superstructure which reflects the interests of the ruling classes. The second phase occurs after the transition - adult education under socialism. The central contradiction here is that historical experience tells us that where such transformations have occurred throughout the world, the revolution has lost direction, as the revolutionaries of today become the conservationists of tomorrow, and one group of oppressors are replaced by another. Such a contradiction comes about because of the failure of the revolution to grasp the nature of education to encourage the constant critique, or 'permanent revolution'. More humanistic interpretations of Marxism have begun to understand this requirement. For example, in Yugoslavia, a number of Marxist intellectuals known collectively as the Yugoslav Praxis Group, felt that by the end of the 1950s their country's socialist administration was beginning to lose sight of their unique interpretation of socialism based on Marx's notion of 'permanent revolution', as dissidence was suppressed rather than encouraged. Their demand for the sustenance of the revolutionary urge through 'concrete, critical thinking' was to lead almost inevitably to their own suppression by the Communist Party machinery (Armstrong, 1986).

From this follows our third consideration. Although the role for adult educators has different requirements in these two phases, in both it must be organized around the notion of praxis. This was argued for at last

year's AERC conference (Clarke, 1986). Praxis is not specifically a Marxist concept, but was used by Marx to argue for the necessity of the unity of theory and practice. That is, action must be informed by a consistent, coherent and conscious theoretical perspective, but in a dialectical way. As Marx said, 'philosophers have only interpreted the world, in various ways, the point is to change it', and in the process 'it is essential to educate the educators themselves' (Theses on Feuerbach). This perspective has been developed in the writings of Gramsci, and more recently in the work of Freire and Giroux. Thus, manifestos for practical action must be evaluated not only in terms of practical outcomes and possibilities, but in terms of its underlying theoretical assumptions, and the dialectical relationship between the two. Furthermore, this should be comprehensive as well as consistent. Adult educators will need to develop praxis in terms of organization, curriculum (including the 'hidden' curriculum) and pedagogy, and above all, between the personal and the political. Radical adult educators cannot be armchair revolutionaries, nor socialist only in the workplace, but in the way they practise their own lives.

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HORIZONTAL INTEGRATION IN THE CONTEXT OF LIFELONG EDUCATION: A CONCEPTUAL ANALYSIS

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Since 1972 when the Faure Report touted lifelong education as a "master concept" for the organization of education systems it has become encumbered with conceptual confusion. Some ambiguity stems from Faure's imprecise usage of "learning" and "education", and more from an attempt to introduce "mathematics" into the lexicon of lifelong "educators". "Learning" and "education" are often used interchangeably and this, coupled with confusion about whether lifelong education is a "policy", "philosophy", synonym for "adult education", or "ideology", weakens efforts to understand its foundations, and jeopardizes attempts to implement policies congruent with its exhortations. Hence, many institutions describe time-worn activities as lifelong "learning" (or "education"). The activities are the same; only the nameplate has changed. Operations are rarely informed by discussions concerning lifelong education theory. An example was the 1976 Lifelong Learning Act in the U.S.A. which was more concerned with rationalizing adult education than with lifelong education. The purpose of this paper is to examine key variables that comprise lifelong education and analyze socio-philosophical perspectives and policies associated with attempts to foster horizontal integration.

Lifelong learning is an inevitable corollary of life on earth. All people are engaged in lifelong learning irrespective of whether they are rotting in prison, working a plough, sitting at a desk, or labouring in a factory. It is as inevitable as night and day and probably a tautology. Some lives are shorter than others and some learning yields more desirable outcomes than other kinds. There will be a continuing need to study the psychology of "lifelong learners" - people everywhere - but, in general, "lifelong learning" is a theoretically and operationally less important matter than lifelong education. As a theoretical construct "lifelong learning" lacks explanatory power.

For a contrary view consider Knapper and Cropley (1985) who claim that lifelong learning is not the spontaneous day-to-day learning of everyday life. It is what Tough (1971) called "deliberate learning". But this definition will not suffice because "deliberate learning", as described by authors associated with the "self-directed learning" tradition, usually constitutes education. Education is a systematic, deliberate process used to foster learning. Whether it is "self" or "other" directed is beside the point.

The Adult Education committee of the British Ministry of Reconstruction (Final Report, 1919) helped shape the contemporary character of lifelong education. In his letter of transmittal, A.L. Smith, Master of Balliol, said "adult

education must not be regarded as a luxury for a few exceptional persons here and there, nor as a thing which concerns only a short span of early manhood". Adult education should become a "permanent national necessity, an inseparable aspect of citizenship, and therefore should be universal and lifelong". Moreover, Smith claimed adult education should be "spread uniformly and systematically over the whole community". The conceptual and operational developments presaged by the 1919 Report largely failed to emerge because of depression and war. But socio-technical and economic changes evoked by W.W. II, and the decade following, coupled with dissatisfaction with the education "system" left by departing colonial powers, created a new sensitivity to and affection for lifelong education. By 1960 the need for conceptual developments was widely recognized and, at the Second UNESCO World Conference, delegates recommended the adoption of lifelong education as a "goal" for governments. By the time of the Third UNESCO World Conference (Tokyo, 1972) public education systems were under considerable attack and there were widespread discussions concerning the need for reform.

In many respects 1972 was an watershed year. OPEC had embarked on its plan to triple oil prices which had an irrevocable impact on the political economy, and thus the education system, of many nations. The Club of Rome published Limits to Growth; the U.N. Environment Conference considered the Blueprint for Survival; the Faure (1972) Report recommended lifelong education as a "master concept". In August, delegates at the Third UNESCO World Conference on Adult Education reaffirmed their commitment to lifelong education, particularly as an instrument to ameliorate the plight of the disadvantaged. Most importantly, in March, the UNESCO Institute of Education in Hamburg decided to make lifelong education the centrepiece of their research program. Since then, their International Review of Education, joined in 1982 by the International Journal of Lifelong Education, have become important vehicles for discussion concerning lifelong education.

Basic Concepts

Fig. 1 shows two key dimensions of lifelong education. The vertical axis portrays the fact education should occur throughout life. This does not mean a hapless populace is condemned to lifelong schooling, as Ohliger (1974) feared. On the contrary, people should be able to opt in and out of a variety of formal and nonformal educational settings throughout life. Vertical integration refers to the need to coordinate temporally-separated and hierarchically-ordered elements of the education system. In a vertically integrated situation, age-related and other barriers to participation would be removed. Movement within the system would be based as much on attitudes toward education as on the mastery of "basic knowledge", credentials, or other prerequisites. Plenty of people still believe old dogs cannot learn new tricks and, in too many places, education is seen to be "kids stuff", the near exclusive preserve of youth. In a vertically integrated situation

participation in education would be more evenly spread over the

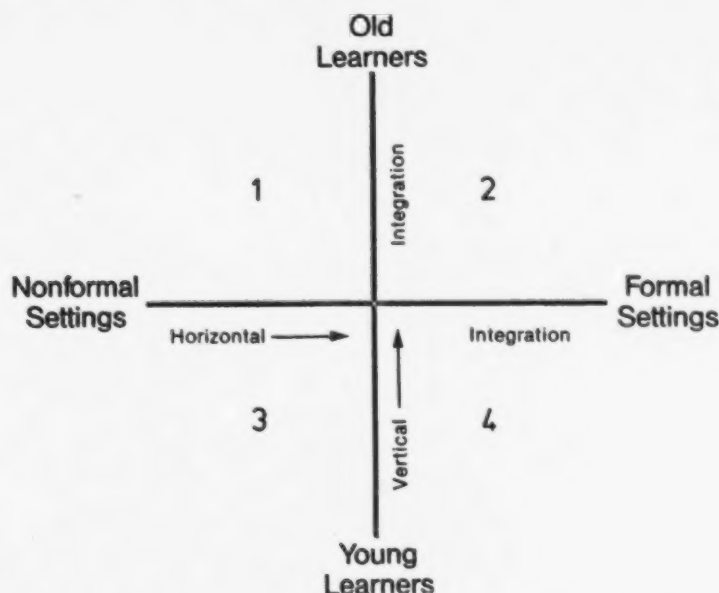


Fig. 1. Dimensions of lifelong education

life span than at present.

Hopefully, all education would involve learning. But not all learning involves education. Education occurs in a variety of formal (e.g. school, college, university) or nonformal (out-of-school e.g. farm, factory, church) settings. People also learn in informal settings but it is a contradiction in terms to speak of "informal education". People learn from the news media and the serendipitous encounters of everyday life. They also learn not to touch a hot stove. But this "learning" does not usually involve education even though, to a lay person, it may seem "educative".

This paper is primarily about horizontal integration which refers to the need to foster a more relaxed attitude about and links between education that occurs in formal and nonformal settings. There are more educators and learners working in nonformal than in formal educational settings. Typically, formal education is government sponsored, highly-organized, assigned adequate resources and involves credentials. Nonformal education is largely unorganized, has inadequate resources, a stigma is attached to it, and its credentials are marginal or nonexistent. It largely occurs in "non-educational" agencies, institutions or settings (such as prisons, farms and churches). In a horizontally integrated situation what is learned would count more than where it was learned. Education occurring in formal and nonformal settings would be linked.

What Faure (1972) and others (e.g. Boshier, 1980) called a

"learning society" would result from the achievement of vertical and horizontal integration within the context of lifelong education. Education, and access to it, would be an inalienable human right, as fundamental as clean water and a roof over the head. People would opt in and out of a variety of formal and nonformal educational settings as they experience change in the socio-technological, cultural or socio-psychological context they inhabit. Vertical integration would ensure that education was "lifelong"; horizontal integration would ensure it was "lifewide". The creation of a learning society, involving vertical and horizontal integration, would have immense consequences for the goals and content of education, the "educational" roles of "noneducational" institutions, financing, legislation pertaining to education, credentialling, and patterns of power and authority.

Socio-philosophical perspectives

Since 1972 there have been many attempts to implement policies congruent with principles of lifelong education. Most are piecemeal and involve fine-tuning or modifying an existing policy or procedure. With few exceptions, most resources are still allocated to quadrant 4 in Fig. 1 (the "formal" education of "young" people). Moreover, much is being done in the name of "lifelong education" that violates the ethos enunciated by its architects. (This is the educational equivalent of corporations "conscientizing" their employees). Faure (1972), Lengrand (1970), and the other intellectual godfathers of lifelong education primarily saw it, and horizontal integration, as an instrument to foster social change. Today, it is possible to discern at least three socio-philosophical emphases associated with relationships between formal and nonformal settings for education. In one, formal education is dominant and "reproduction" the goal. In the second, formal and nonformal education exist in a symbiotic relationship in the manner envisaged by Faure and, in the third, nonformal education is dominant and often, but not always, designed to upset extant power relationships.

Formal education dominant

In many parts of the world, formal education is isolated from what goes on in the name of nonformal education. Formal education largely perpetuates or "reproduces" the culture along with existing power relationships - which generally favour elites including the educators and their clients more than those who, for various socio-psychological or political reasons, are denied access to, or fail to avail themselves of opportunities to participate in, formal education. In this situation, those in the impoverished and marginalized fringes of nonformal education are often in conflict with power elites and, in places like Chile, their work is perilous.

It has also been argued that nonformal education assumes society is stable and the roles of the people are fixed; this exacerbates rather than diminishes inequality by inhibiting

social mobility made possible by participation in formal education. Barber (1981) for example, said nonformal education is a way of perpetuating the "inferior" position of poor rural people and suggests the emphasis should be on widespread primary education. This appears to be an extension of the "development" argument heard in the 1960's and is defective because providing the poor with access to the standard forms of rural schooling does not produce "equal opportunities" or significantly modify the extent to which they participate in the economic or political life of the country. However, the extent to which nonformal education can make a difference also needs scrutiny.

Symbiosis

During times of rapid change, and in situations such as Guinea-Bissau where the school system has collapsed (Rahnema, 1986) or China, where there is a vast cohort of people denied formal education because of the Cultural Revolution, and in many other situations, it is impossible to deliver all needed education through formal settings. Ideally, formal and nonformal settings would exist in a symbiotic relationship. Each resorts to and is informed by the other. For example, many breakthroughs in plant and animal sciences have occurred in formal educational settings such as university laboratories. By themselves, these will not increase agricultural production unless linked to farmers through nonformal education (which, in this example, would probably entail an extension program). In most countries nonformal and formal education are parallel and there is little interaction between them. In a symbiotic situation, general systems theory - which draws on biology, cybernetics and information-processing theory - could be used to explain the actual and most desired relationship between formal and nonformal education within ecological frames of reference. The need for a change in the relationship would arise when there was evidence of malfunctioning in the system. This kind of analysis would need to have adequate regard for the uniqueness of the local socio-cultural context because previous attempts to employ a systems approach in educational planning have foundered because of ethnocentrism or chauvinism on the part of those engaged in "development".

Some writers claim it is impossible to "organize the unorganizable". They say it is dangerous and arrogant for those in formal education to think they can organize those in nonformal education. Reciprocity is a commendable ideal but, in any interaction, formal will inevitably swamp nonformal education. It is for this reason that Knapper and Cropley (1985) say policy-makers must "tread a narrow path between educational imperialism and worthwhile reform". Imperialism could be avoided by ensuring that concepts and events associated with nonformal education are as strong as influence exerted in the other direction. For this kind of reason some of the commissioners on Faure's committee (such as Rahnema, 1986) spoke of the desired interaction as constituting an "un-system".

Nonformal Education Dominant

The "anarchistic-utopian" view that condemns formal education as being elitist, an instrument for reproduction, or a plot to maintain existing structural inequalities, is often associated with the notion of securing education through existing institutions, agencies or settings in the community. Advocates of this view often share the Marxian goal of social transformation or are identified with cultural revival or revitalization movements. But anarchist-utopians rarely put their theory into practice. Perhaps the best known advocate of anarchist-utopian thinking is Illich (1970) whose Deschooling society provoked impassioned discussion but little analysis concerning ways to break the stranglehold of schools. Learning exchanges (such as the one in Malvern, Australia) were created, and "webs" established, but little is heard from them today.

Nonformal education has demonstrated its ability to carry out many educational tasks which cannot and should not be attempted in schools. However, it can also become an instrument for oppression or for the furtherance of the ideological or political objectives of the elite.

Conclusion

The "sympiotic" approach of Faure which called for the creation of a learning society characterized by a high degree of interaction between formal and nonformal education still seems more viable than one where either formal or nonformal education is dominant. The fact formal and nonformal education are usually founded on different socio-philosophical assumptions serves to strengthen rather than detract from the case to be made for a sympiotic approach.

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Learning Liberation: A Comparative Analysis of Feminist Consciousness Raising and Freire's Conscientization Method

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ABSTRACT: As a result of a comparative analysis of the philosophy and practice of Freire's notion of conscientization with the feminist practice of consciousness raising, a framework from which to evaluate other similar learning activities within social movements has been suggested.

INTRODUCTION: This analysis examined two educational processes concerned with the development of critical consciousness as the basis for social change. The first process - Freire's method of conscientization, is well known in adult education. On the other hand, the emancipatory power of the consciousness raising activities within the women's movement, has received limited attention. By comparing these two processes in relationship to each other, one can understand more clearly how Freire's method is contextually grounded in Brazil's history and his particular world view. This comparison also illustrates the historical and political basis of feminist consciousness raising wherein women, against considerable odds, are "learning liberation" (Thompson, 1983).

The term "consciousness raising" can be best described as the process and method by which an oppressed group learns to understand its condition, which leads to political activation for the transformation of this condition (Berger, 1974). In an effort to provide further knowledge of the learning activities of social movements for adult education and for the women's movement, the following questions directed this analysis: What are the similarities and differences between the practices of consciousness raising and conscientization, and more specifically how are they culturally tied and how are they culturally free? Do the common elements suggest a model or framework of "consciousness raising" that has universal application?

METHODOLOGY: Studies using the comparative method reflect a variety of approaches. Nevertheless, what is generic to the comparative method is the systematic collection of data and the identification of criteria or themes with which to compare the practices or systems being studied (Bereday, 1964). To understand the context from which each practice emerged, data was collected on the historical, political, and philosophical influences which helped to shape both practices. To compare each of the processes, the literature was analyzed and data collected on: how themes and content are determined, the nature of communication, whether teachers or leaders were used in the process, and what were the phases or stages identified in the process.

BACKGROUND ON CONSCIENTIZATION: Brazil has been a severely exploited nation since the colonization by the Portuguese in the 1500's. Economic production, restricted to immense tracts of land upon which plantations and sugar mills were developed, was controlled by an absentee government placing the landowners in extremely powerful positions. A period of transition began in the early 1800's and by the 1950's, activities directed at political and economic reform by both the government and the church, reached a particular intensity.

Freire was born in 1921 in Recife, Brazil, where he studied law and education and worked with the urban poor as a welfare official and later as an educator. One of his programs, developed for the Movement for Basic Education (MEB) program of the Catholic church, succeeded in teaching 300 labourers to read in 45 days. He further developed his perspective on literacy and conscientization as the first director of the University of Recife's Cultural Extension Services. The populist president Goulart, elected

in 1961, was impressed by Freire's success and appointed him coordinator of the National Literacy Program during which coordinators were trained by the hundreds in almost all of the state capitals. The national campaign was never fully realized. On April 1, 1964, after a military coup Freire was jailed for 70 days for subversive activities. He was exiled and subsequently moved to Chile where he worked for the Christian Democratic government on the national literacy program. He spent one year at Harvard and in 1970 joined the World Council of Churches in Geneva as a consultant on literacy for many countries. Fourteen years after his exile, he was welcomed back to Brazil and now teaches at the Catholic University in Sao Paulo.

Freire's perspective and practice reflect a variety of influences: including his Brazilian background, Christianity, Marxism, and existential philosophy (Collins, 1974). Like other liberation theologians, Freire argues that the church must become involved in the liberation of the oppressed. The opportunity for such activity is closely tied to the historical context. Freire describes Brazil as a nation in transition from a closed to an open society. He believes that this transition is created and reflected in changes in the consciousness of the oppressed (Freire, 1970, 1973, 1985). Closed societies maintain a magical consciousness wherein people cannot see the problematical situations of daily life and where they are unaware of the challenges outside of the sphere of biological necessity. During the transition from closed to open societies, there is a shift to naive consciousness in which the interests and concerns of the people begin to extend beyond simple survival. Critical consciousness is " ... a deepening awareness of both the sociocultural reality that shapes their lives and of their capacity to transform that reality "(Freire, 1985, p. 93).

Freire considers education to be a political activity and believes that in the literacy process learners must teach themselves to read and write. He rejects the use of primers and the banking approach to education in which learners are passive recipients of knowledge. He emphasizes the importance of letting the topics for discussion emerge from the people, rather than prescribing themes and vocabulary for them. In his method, the program content is developed by **coordinators** who, through **co-investigation** with the community, find common situations and vocabulary. The coordinators work with the learners upon a foundation of **dialogue** which is "the encounter between men [people] mediated by the world, in order to name the world" (1970, p. 76). For these teachers/coordinators to work with, and not for, the oppressed requires those from the middle class or intellectual elite to commit "class suicide" which is the process of renouncing the dominant class' paternalistic attitude and practice of cultural invasion. The common words identified through co-investigation and connected to familiar situations are called **generative words**. These familiar situations are **codified** as problems and presented as pictures (often slides or drawings). Following discussion of the implication and meaning of the "problem-situation" (**decodification**), the generative words are presented separately from the pictures and are broken down into their phonemic families. The participants then begin to create their own words by combining these phonemic families.

BACKGROUND ON CONSCIOUSNESS RAISING: The women's movement is not a recent phenomenon. Although the history of the women's movement and the voices of women who have struggled against their oppression have been "confined to cycles of lost and found", it is evident that for as long as men have held power, women have resisted (Spender, 1983). In the mid to late sixties a re-emergence of the women's movement grew out of a particular kind of social reality found in advanced capitalist societies. Advances in contraception, a dramatic rise in numbers of women entering higher education and the market economy, and the social upheaval of the sixties revealed contradictions within society which could no longer remain hidden (Bartky,

1977).

The participants in the women's movement are not a homogeneous group, nor is there one perspective which reflects all women's experience of oppression. Within this diversity, however, there are several common themes. The first theme is the understanding that women are oppressed coupled with the belief that this is not inevitable, but something which must and can be changed. Identifying the nature and causes of women's oppression is probably the most fundamental concern of modern feminism. There is common agreement that women's oppression is gender based and supported by sexism: the systematic exclusion and denigration of women (Spender, 1980). This gender difference located in both the sexual and work sphere not only binds women but also distinguishes them from their oppressors. The relationship of oppressed to oppressor for women is a tyranny which operates within intimacy, rather than one between worker and capitalist (Eisenstein, 1984). The different experiences and approaches to understanding the origins of women's oppression have led to the development of diverse political positions within feminism. Although feminist ideology not does fit well on the typical Left-Right political continuum, the following categories are commonly used: radical, liberal, Marxist, Marxist-Socialist, and lesbian-separatist (Jaggar, 1977).

The second theme is the understanding that "the personal is political". This means that women experience the reality of unequal power relationships within their personal lives. Therefore the oppression of women must be analyzed within the personal and private world in which women live. The exploration of the internal and private is a political necessity for women and has given rise to crucial elements of new knowledge about women's situation (MacKinnon, 1982; Eisenstein, 1984).

The third and final theme common among the diverse feminist perspectives is the development of a feminist consciousness. "Feminists are not aware of different things than other people; they are aware of the same things differently" (Bartky, 1977, p. 26). Becoming a feminist is a profound personal transformation, an experience which cuts across ideological divisions in the women's movement and which develops a sense of sisterhood. It is both painful and rewarding for there is awareness of victimization together with a consciousness of power (Bartky, 1977). It is also different for each woman and a continual process that is grounded in the historical and social context. For feminists, day to day living becomes problematical for there is little in society that is free of the sex-role differentiation as a major organizing principle (Stanley & Wise, 1984).

Consciousness raising groups have been identified as being both a cause and a result of the movement (Freeman, 1973). Early consciousness raising groups were spontaneous activities, rather than planned events (Sarachild, 1968). The New York Radical Women, a group which broke away from the New Left, discovered the power in sharing personal experiences of oppression, validating personal feelings and experiences, and identifying commonalities within each woman's story. Realizing that such discussion should precede finding strategies for action, they decided to continue the process. Guidelines were developed and topics suggested. The main principle however, was always that the source of knowledge about women, both the personal and historical, was women themselves. Literature and other external sources of information were always tested against the women's experiences. The groups were leaderless, and men, identified as the oppressors, were excluded from these sessions. Each woman was encouraged to speak without interruption and without judgement by the group. Commitment to treating each other as equals, regular attendance, confidentiality, and rotation of the location of meetings among participants' homes became established guidelines. Usually after the first few sessions, the group would decide not to accept any new members. Some of the

groups continued for months and others for years.

Retrospective analysis of these consciousness raising groups revealed four phases in the process (Allen, 1970). **Opening up** is the phase in which trust and intimacy are developed. **Sharing**, the next phase, emphasises women teaching one another and understanding the common nature of women's problems. With this raw data collected, the next phase is **analyzing**, where other sources of information such as studies and books are used, but are always tested against women's experience. The last phase - **abstraction**, is usually not realized unless a group has been meeting for at least a year. In this phase a holistic view of women's oppression is acquired and priorities and strategies for change worked on. These phases are described as ongoing with one phase never really ending before the next one began.

Consciousness raising is considered neither a phase, a technique, nor therapy (Allen, 1970; Sarachild, 1968; Stanley & Wise, 1984; Spender, 1985). It is about developing ideology grounded in women's day to day reality. Although consciousness raising can be therapeutic, it is different from therapy because the process does not identify women as "ill". Rather, it focuses on understanding the social structures which support women's oppression, and on strategies for social change.

COMPARISON: The history of both practices affirms the dialectical relationship between social movements and particular political and economic changes. Freire describes the culture of silence within the closed Latin American societies. Feminists speak of women not having a voice within patriarchy. Freire asserts that critical consciousness is the foundation of liberation, and within the women's movement there is agreement on the importance of a feminist consciousness. The liberation of both women and third world peasants involves finding a voice to name the world. Freire's writing style approaches the subject in an intellectual and abstract way. The literature on the feminist practice of consciousness raising includes a variety of approaches from the anecdotal to the analytic. One is struck by the difference in "voice": Freire objectifies the process and feminists write as subjects of the process.

The principle of always grounding the educational process within the experiences and lives of the participants is common to both conscientization and consciousness raising. The process of co-investigation is also found in both, but the techniques used are quite different and reflect the different contexts. Freire uses coordinators to co-investigate with the people and to identify "problem-situations" and generative words. Similarly, within consciousness raising, the themes emerge out of women sharing their personal experiences.

The possibility of domination through prescription of themes and content is found in both practices. Freire has found that coordinators are often impatient with participants and impose vocabularies upon them. Within consciousness raising groups there can be domination by women who are more articulate and self-confident. This problem is particularly acute in groups where there is a mixture of middle and working class women. Perhaps Freire's notion of class suicide is not so foreign to these situations. The more articulate and confident women must commit class suicide in order to maintain a true dialogue and horizontal relationship with their sisters.

Freire's concept of dialogue, as the only authentic form of communication, is parallel to feminist attempts to work as equals within consciousness raising groups. The idea that each participant is both teacher and learner is part of both processes. The difference lies in the presence of an clearly identified coordinator within Freire's groups and the absence of such an individual in consciousness raising.

Consciousness raising groups do not identify any participant as leader or teacher. Freire, on the other hand, has developed a method in which the role of coordinators is critical. Those teachers who emerge from the middle class or intellectual elite must commit class suicide in order to work with rather than for the oppressed. As previously mentioned, this notion may also apply to situations in mixed-class consciousness raising groups.

Leadership in consciousness raising groups, although it may not resemble the activities of coordinators in Freire's method, is not necessarily absent. The process helps to develop the latent leadership capacity within women. In consciousness raising groups men are excluded as both participants and leaders. Men may have empathy for women's oppression and may commit class suicide but they cannot commit "gender suicide" in order to work with women. Researchers such as Spender (1985) argue that although a similar process would be useful for men and for mixed sex groups, at this point their exclusion is critical for women to continue to develop a voice and to recreate a language that speaks of their experiences.

In both practices there are distinct phases which move from description to analysis. In consciousness raising, opening up and sharing are similar to the process of co-investigation in Freire's method. The collection of individual women's experiences of oppression encodes them in a way similar to Freire's codification of problem-situations within pictures. The process of identification of common themes, analysis, and understanding of the social structures supporting their oppression is similar to the decodification which Freire describes.

CONCLUSIONS: Before this discussion proceeds, the perspective of consciousness raising held by this writer must be reviewed. It is regarded as the method by which an oppressed group learns to understand its condition which leads to political activation for the transformation of this condition. Through analysis of the similarities and differences between the feminist practice of consciousness raising and Freire's practice of conscientization, this writer considers that those characteristics common to both practices reflect the principles of consciousness raising and the differences are considered as techniques which will vary from one context to another. These principles are as follows:

1. That themes, content, or curriculum are generated from the experiences and day-to-day reality of the learners, as perceived by the learners.
2. That communication amongst learners-teachers is dialogical, that is, a reciprocal exchange between equals wherein teacher is learner and learner is teacher.
3. That the process moves through phases of sharing (co-investigation), analysis (codification), and abstraction (decodification).

What are the implications of this analysis for both adult education and the women's movement? The notion that adult education should return to its historical roots and foster partnerships with current social movements is often encouraged. This writer concludes, however, that consciousness raising should remain the method of liberating social movements and should not become a method of adult education to increase participation nor a technique for behavioural change. In its eagerness to relight the fire, adult education should be cognizant of the potential for domination and invasion into the activities of social movements.

Concerns about domination and invasion are also relevant to feminist educators who, in their impatience to achieve some changes, begin to manipulate the practice of consciousness raising as a technique. This writer believes that consciousness raising is "the feminist method" and is the foundation of educational activities of this movement. Some argue that this phase of the movement is over, and point to evidence of this in

the lack of identifiable consciousness raising groups. This writer argues that the "feminist method" has been transformed and has been relocated in other activities. Further examination of activities such as women's studies programs, women's centres, and re-entry programs is needed to test the conclusions reached in this analysis. Future study may also reveal that more than three principles are involved, and may also identify a variety of techniques which reflect these principles.

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NURTURING OURSELVES:
CONTINUING EDUCATION FOR THE MID-CAREER PROFESSORS
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Abstract: The purpose of this critical review of the literature is to explore in-depth the positive and negative forces that mold and shape professors' careers at mid-life and to suggest further avenues of research related to their continued learning and development.

College and university professors are often overlooked in the study of continuing education for the professions. It has been assumed that professors are continuing learners due to the very nature of their profession. This assumption has been questioned in recent research reports that have described a large proportion of the faculty, especially those at mid-career, as unmotivated and apathetic (Clark, Boyer, and Corcoran, 1985; Melendez and de Guzman, 1983; Schuster and Bowen, 1985). The purpose of this critical review of the literature is to explore in-depth the positive and negative forces that mold and shape professors' careers at mid-life and to suggest further avenues for research related to their continued learning and development.

Both empirical investigations with college and university professors as well as theoretical writings about the issues concerning mid-career faculty are reviewed. The discussion of the literature is divided into two major sections: those written from the perspective of the institution, and those written from the perspective of the individual faculty member. The major themes that emerge from the review are then discussed, followed by implications for further research.

Literature Emphasizing an Institutional Perspective

Most of the literature concerning faculty development is framed in the institutional perspective. From this literature emerge three influences on institutional perceptions of mid-career faculty. These are: 1) the changing composition of the faculty; 2) the changing nature of higher education; and 3) the institutional view of faculty productivity.

Changing Composition of the Faculty.

Faculty members are older than they used to be. The median age of faculty, though it varies for different disciplines, rose from 39 years in the 1968-69 academic year to 45 years in 1978-79 (George and Winfield-Laird, 1984). The projection is for that age rise to continue into the 21st century (Clark and Corcoran, 1987). In addition, there has been an increase in the percentage of faculty members being tenured, as well as fewer faculty leaving the professoriate because of the tighter job market and changes in the retirement system (Clark and Corcoran, 1987). George and Winfield-Laird (1984) conjecture that there are four important implications for institutions related to this aging of college faculty: 1) increased cost as overall salary levels tend to be higher for senior professors; 2) reduced administrative flexibility as a greater percentage of the faculty are tenured; 3) inadequate inflow of new ideas and skills; and 4) adverse effects on the hiring and tenuring of minorities and women. Hanson (1985) echoes these same sentiments about increased financial pressure and inability to hire new Ph.D.'s. He adds one additional concern, that of tenure quotas, which keep some faculty floating from institution to institution and discourage others from even trying to enter the professoriate. This literature clearly maintains that an aging faculty negatively affects the institution.

Changing Nature of the Institution.

At the same time that the composition of the faculty is changing, so is too the nature of the institution of higher education, and thus the expectations for faculty. Altbach (1980) describes the changes in the academic profession since World War II. He states that, in general, a dramatic expansion in enrollment, coupled with a move toward an egalitarian system, has directly affected the social class of the student body and the professoriate. In addition, there has been a change in the resource base for higher education with increased government and private funding for research. This has led to a greater

insistence on accountability and an increased emphasis on research, Clark and Lewis (1985) agree with many of Altbach's observations in identifying the present condition of higher education: 1) continued changes in student enrollment; 2) greater strain in financial resources for areas other than research; 3) increased accountability; 4) more centralized governance; and 5) continued aging of the faculty workforce.

Altbach (1980) also makes the observation that the standard in higher education has become a graduate-school oriented, research model. In this model researchers receive greater prestige and generally higher salaries than those who primarily teach and serve. Thus, merely to teach and serve is no longer a choice at many institutions. This change in value orientation has most affected the middle-aged or older professor who either does not like, is not qualified, or does not value the new model (Schuster and Bowen, 1985).

A number of scholars have also noted the decline in the sense of community evidenced on college campuses (Altbach, 1980; Armour, Caffarella, Furhmann, and Wergin, 1987; Schuster and Bowen, 1985). They view this as a direct result of the heterogeneous background of the faculty (e.g., gender, age, class), the diversity of training based on discipline orientations, and the increased demand/value for specialization. Schuster and Bowen (1985) see this decline in community as contributing to a dispirited and segmented faculty.

Productivity of Faculty.

A common assumption has been that as faculty age their productivity decreases, especially in the area of scholarly research activities. This statement appears to be true when examining simple statements related to numbers. For example, Ladd (1979) reported that 36% of 35-44 year old professors had not published in the previous two years, while 50% of professors 45-64 years of age had not done so.

But other researchers contest this assumption. For example, Bayer and Dutton (1977), by studying a sub-sample of faculty members from the 1972-73 American Commission of Higher Education study, examined the relationship between age and several performance activity variables. They found no substantiation for the premise that older age faculty lose their vigor in teaching and research. They hypothesized that variables such as changing market conditions, generational differences, selective attrition, or movement in the organization make it appear that older faculty members are less productive.

Reskin (1985) and Blackburn and Lawrence (1986), in two recent comprehensive reviews of the literature on aging and productivity of faculty, add further confirmation that any simple effects of aging on productivity of faculty appear small. Reskin (1985) reviewed studies that investigated productivity primarily from the viewpoint of number of publications produced. In no cases was the level of productivity negatively related to age. Instead, productivity appeared to peak ten years after receiving one's doctorate, with a second peak just before retirement. Blackburn and Lawrence (1986) critiqued the job performance of faculty in terms of teaching, research, and service using three major theoretical perspectives on aging: biological, psychological, and sociological. They also did not find age to be a critical predictor of a faculty members' productivity. Rather, similar to the conclusions of Bayer and Dutton (1977), Blackburn and Lawrence stressed that other factors such as cohort differences, environmental conditions, and the nature of one's discipline need to be examined in relationship to the job performance of faculty members.

Though the studies cited on the issue of productivity are important, they leave many unanswered questions related to the actual productive work of faculty members. Only a few studies (e.g., Bayer and Dutton, (1977); Blackburn and Lawrence (1986)) have measured the productivity level of faculty across all of their expected responsibilities, including teaching, research, and service. The latter area, that of service, has been almost totally ignored when studying faculty productivity and contributions to their schools, their profession, and the community at large.

Studies from the Perspective of the Individual

From the individual perspective, mid-life is viewed as a time of continued change and growth. Not only are middle-aged people coping with career questions and concerns, but also with many personal issues which tend to surface at this

relatively new, especially studies that address the issues of personal change and development.

Issues of Career Development.

The research of Baldwin (1979, 1984), Entrelin and Everett (1981), Braskamp (1981), Blackburn (1985), and Fuhrmann (1987) support the premises that most faculty proceed through predictable career stages and that these appear to correlate with rank and number of years of teaching. For example, Baldwin (1979, 1984), who studied 106 male faculty members from twelve liberal arts colleges, noted four critical events in the careers of faculty members: 1) process of education and professional socialization; 2) early professional entry into career; 3) opportunities for professional growth (eg. sabbatical); and 4) changes in status (eg. promotion) and roles. The latter two relate more to mid-career than to entry-level faculty. He also found stable characteristics over time: importance of teaching, high value on scholarship, and workload as the greatest source of stress.

More specifically related to career development in middle age, Entrelin and Everett (1981) found, from a survey of professors from four Australian universities and colleges, that those faculty ages 45 to 49 demonstrated an "apparent restlessness and demand for change" (p.92). They conjectured that these feelings could be linked to two factors in faculty members' belief systems: 1) that their track records were as good as they would ever be, and 2) that family commitments were easing. They also found restlessness began to moderate for those in the 50-54 age range. The work of Sarason (1977) echoes similar sentiments. Through his contacts with a variety of professionals, he observed that even though the faculty he talked with were satisfied with their work, they were not excited about that work. There was a sense that they liked what they did, did it well, but simply did not want to continue doing it year in and year out. This has been supported by the work of Armour, Caffarella, Fuhrmann, and Wergin (in press).

Blackburn (1985) has proposed a nine component model of academic career development, four components of which apply to mid-career faculty: 1) certification--the granting of promotions by the institution; 2) sponsoring/mentoring--the shepherding by a senior professor of a student's or younger professor's career; 3) interaction with clients--what happens to faculty members because of the students they teach and work with; and 4) profession/discipline--the influence, based on the tradition and norms of that discipline, on a faculty member's work (eg., control of national visibility, endorsing of work through journals). He cautions that the model will probably need to be adjusted for differences between disciplines and is based predominantly on observations of males and thus may not be fully applicable to females. The possible predictive power of the model is related only to groups of faculty, as no allowance is made in the model for psychological variables related to individual differences.

In conclusion, college faculty at mid-life evidence different career needs than younger faculty. They are concerned about both where they have been and where it is they can still go. While some are satisfied with their progress and their future prospects, many have begun to ask the question, "Is that all there is?"

Issues of Personal Change and Development at Mid-life.

Developmental theorists have cited a number of major tasks and issues with which most adults wrestle at mid-life. For example, Havighurst (1952) has outlined these tasks as follows; 1) adjusting to aging parents; 2) assisting teenage children to become responsible and happy adults; 3) accepting and adjusting to physiological changes; and 4) relating oneself to one's spouse as a person. Though some of these may appear dated, they have been reconfirmed in a study by Merriam and Mullins (1981).

Neugarten and associates (1964, 1973) have described how the orientation towards life of middle-age adults differs from that of younger adults. Life is restructured for them in terms of time left to live versus time since birth. Though described somewhat differently, the same existential themes have surfaced in the research of Gould (1978) and Levinson, Darrow, Klein, Levinson, and McKee (1977). Gould (1978) has described it as destroying the illusion that death can not happen to me or my loved ones, while Levinson couches it in terms of having to confront the polarities of young and old in one's life--"for many

reasons, then, at 40 a man knows more deeply than ever before that he is going to die" (Levinson, et al., 1978, p.215).

Buhler (1968) and Jung (1933) introduced the idea that adults at mid-life become more introspective. They begin to examine themselves critically and look to establish an internal order for themselves. Levinson, et al. (1978) also observed this in their study of psychosocial development of adult males. Their respondents viewed mid-life as a time to reappraise the past and modify one's life accordingly. Levinson, et al., describe how one of their respondents, a university biologist in his mid-forties, struggled with this internal examination of self.

Barnes felt that he had reached an impasse in this life. For sometime now, he had been unable to make critical decisions that faced him. Worse, he could not find a basis on which to make them. His dream of becoming a scientist of the first rank had formerly given meaning to his life and provided clear goals. The enterprise of the first half of life was now completed, but his dream was unrealized and, as it seemed, unrealizable. Suddenly there was nothing to strive for . . . In interviews just before and after his 44th birthday, Barnes expressed an urgent need for a worthwhile enterprise to which he could devote his life. But how could he define what was worthwhile? (Levinson et al., 1978, p.270)

This existential experience of searching for meaning in life can be for some quite painful and troubling. It has led to the coining of the word "mid-life crisis" and a belief that normal development must encompass such a rite of passage for one to continue to grow and develop. Levinson, et al. (1978) did find that for 80% of their subjects the mid-life transition was a time of moderate or severe crisis. This sense of crisis, especially severe crisis, has not been borne out by other researchers. For example, Vaillant (1977) found, in his longitudinal study on the psychosocial development of men, that a mid-life crisis was an exception rather than the rule, though his subjects too were going through a period of inner examination.

Erikson (1963, 1981, 1982) has introduced the concept of "generativity" as a major focus of mid-life. He defines generativity as possessing an inner drive for establishing and guiding the next generation, which if not fulfilled can lead to a sense of stagnation and self-absorption. The work of both Vaillant (1977) and Levinson, et al. (1978) confirms Erikson's theme of generativity, or in Levinson's words, "a legacy to pass onto future generations."

This is not to say that mid-life is all introspection with a primary focus on self-examination and on what one can give to the next generation. Mid-life is also seen as a time of numerous social activities and personal relations (Frankel-Brunswick, 1963). It is pictured as the prime of life, when people are at their maximum ability to handle highly complex and differentiated aspects of their existence (Neugarten, 1963; Baruch, Barnett, and Rivers, 1983). It is also potentially the most powerful stage of life in terms of earning capacity, influence on others, and impact on society in general (Merriam, 1978, Fiske, 1979).

Applying developmental theory to understand the personal lives of faculty members and how their personal concerns and issues interact with their career concerns is still in its infancy. Hodgkinson (1974) was one of the earliest writers to use developmental theory to assist in conceptualizing the lives and careers of faculty and administrators in higher education. Basing his ideas primarily on the early work of Levinson, et al., he describes the issues and problems adults face at each developmental stage and interprets the meaning of each of these stages to the job pressures of faculty and administrators. Hodgkinson characterizes mid-life as a time for introspection and questioning of one's current profession, followed by a period of restabilization. His work is grounded in his own observations from numerous visits to many campuses and the reading of novels and other literary works.

Claxton and Murrell (1984) used Erikson's and Loevinger's (1977) work to give insight into the central issues, concerns, and motivations of senior faculty members, and to assist in understanding how a person will interpret those issues and what reasoning processes will be used. They suggest that by understanding developmental theory, institutions can better formulate policies and procedures to foster the development of individual faculty. They state that the most salient developmental stage related to mid-career faculty is Erikson's (1963) stage of "generativity" versus "stagnation". "A description of

the generative person might indeed be the description of the ideal faculty member: creative, productive, and concerned for the next generation." (Claxton & Murrell, 1984, p.33)

Cytrynbaum, Lee, and Wadner (1982) have given the most comprehensive picture of how developmental theory can be used to describe faculty development through the life course. Using both the personality and social systems perspective, they describe the developmental tasks, potentialities, and critical transitional periods and their impact on faculty growth, morale, commitment, productivity, and compatibility with university expectations for five groups of faculty: 1) age 30 transition; 2) mid-life; 3) late-entry; 4) dual career; and 5) senior faculty. They stress the idea that at mid-life faculty are "consciously reassessing selected components of their entire personal and professional lives--past present and future." (p.15)

In summary, though mid-life is a time of continued personal change and growth in the lives of faculty members, little attention has been given to this very important area of study. The central themes of mid-life--finding meaning to one's life, leaving a legacy for future generations, and realizing that death comes to all--can not be overlooked in the study of how faculty members continue to learn and change in mid-life.

Discussion of Major Themes

As revealed by the literature, there are both positive and negative forces that shape a professor's career at mid-life. Primarily from the institutional perspective, the major theme is that older does not appear to be better. For higher education institutions, having a predominately middle-aged and older faculty means increased costs to support these senior faculty, reduced administrative flexibility as a greater percentage of these faculty become tenured, and a lessened chance of hiring new Ph.D.'s as there are fewer opening in the faculty ranks. In addition, some middle-aged faculty just do not fit into the colleges and universities of the 1980's and 90's. They were schooled to believe that teaching should be their primary endeavor and either are not qualified or do not care to embrace the new research ethic which predominates on most campuses today.

This rather gloomy picture of the effects of an aging faculty have lead some authors to speculate that the morale of many faculty is at an all-time low. For example, Schuster and Bowen (1985), who interviewed 532 rank and file faculty members and administrators at 38 diverse colleges, found that 2/3's of their respondents viewed faculty morale as no better than fair, and 1/4 as very poor. A number of others (Clark, Boyer and Corcoran, 1985; Melendez and de Guzman, 1983), primarily based on their own observations and critique of the situation, give the impression that they agree with Schuster and Bowen. All three studies view the morale problem as stemming primarily from institutional forces, such as deterioration of the work environment, a changing reward structure, and an inhospitable labor market.

On the more positive side, some of the literature emphasizes that most faculty members continue to grow and change, and be productive throughout their careers. The major theme that emerges is the need at mid-life for professors to examine where they have been, where they are now, and where they want to go. There appears to be an inner force to find or create something worthwhile, and thus make a valued contribution to the lives of others. As work is central to most professors lives, part of that search usually relates to how they teach, research, and serve. To a weary department chair or dean, this search may seem endless, but if allowed to run its course, the search may result in a more satisfied and perhaps even a more productive faculty member.

This need to find a place and leave one's mark on life, highlighted by Levinson, et al. (1978) and Erikson (1963), was confirmed in a recent exploratory study of senior faculty in the Humanities at a large urban university. Armour, Caffarella, Fuhmann, and Wergin (1987) discovered that most of these senior faculty had carved out a place for themselves at the university based on

the activities to which they most wished to devote time and energy. These activities are not necessarily those for which the faculty members were hired or normally accepted as standard academic pursuits ... Some teach, others research and publish, still others serve, many do all three well, but

each ... finds great satisfaction in performing the duties of that niche well. (1987, p14)

As long as the institution recognizes that the niche the professor has created has some value, both the individual professor and the institution usually benefit.

Summary and Implications for Research

In summary, the bulk of the studies on faculty development at mid-career have been from the institutional perspective. The major issue addressed by most of these studies is how can the institution ensure that its faculty, the majority of whom are middle-aged and older, will remain vital and productive in times of increased costs, decreased revenues, and lessened flexibility. Studies from the perspective of individual faculty members have been more limited in number. Yet, having a clear understanding of the issues and tasks mid-career faculty are wrestling with has the potential for developing a more positive and workable response to the major institutional issue of maintaining a vital and productive faculty. As stated by John Gardner, "Institutions don't make themselves dynamic. The process starts with the individual." (Gardner, 1978, p.16)

Therefore, in studying faculty development at mid-life, it is important to consider both the institutional and individual forces that mold and shape a faculty member's career (Bland & Schmitz, 1986). Major research questions that need to be addressed are as follows:

1. Is it appropriate for mid-career faculty to focus only on teaching, research, or service or on any combination of only two versus all three? If so, how can the present reward system be changed to accommodate such an arrangement?
2. Is the concept of finding a niche or place in one's institution applicable to most mid-career faculty? If so, what should the role of the department chairs and deans be in assisting faculty members to find these niches?
3. What kinds of institutionally-based faculty development programs would promote the growth and development of mid-career faculty?
4. What role should adult educators play in assisting both faculty and administrators in addressing this important concern of maintaining a vital and productive faculty?

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Interorganizational Relationships in Continuing Professional Education: A Conceptual Framework

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Abstract: A conceptual framework is proposed to explain the extent to which providers of continuing professional education form interdependent relationships.

Background of the Framework

Collaboration among providers of CPE has generally been seen as a desirable strategy for action and one that is worth encouraging. However, in order to effectively stimulate or facilitate interagency collaboration, it is necessary to understand its system of determinants. The growing literature that deals with this phenomenon is more prescriptive than analytical and does not provide a knowledge base for effective action. Thus, our purpose is to present a conceptual framework to answer the question: "Under what conditions do CPE providers enter into what degrees of interdependent relationships with other CPE providers?" This question in a more general form has guided much research in the literature on organizations and has been integrated into a series of researchable propositions (Schermerhorn, 1975). We borrow heavily from these propositions in developing our own framework because we believe that CPE providers behave like any other organization in terms of interorganizational relationships.

A fundamental assumption of the framework is that providers decide to engage in interdependent relationships with one another:

The applicability of this decision frame of reference is supported in the literature, and its key insight is the recognition of individuals as mediators of the organizations' interorganizational roles. Theoretically, the phenomenon may be viewed in terms of a scenario depicting an organizational decision-maker influencing organizational behavior under constraints imposed by the organizational and environmental contexts (Schermerhorn, 1975, p. 852).

The logic of our framework is that certain motivating conditions exist that create a need for cooperation in a decision-maker. Decision-maker need, however, is necessary but not sufficient to create action. The need must be developed into demand by one or more of a series of determinants before the decision-maker can act. The framework specifies three conditions (motivators) under

which CPE providers come to consider high degrees of interdependence as a possible action strategy and three conditions (determinants) under which it becomes a preferred action strategy. The unit of analysis is a decision maker's (either an individual or group) action strategy with regard to a specific CPE program. This implies that if decision-makers are planning several programs at the same time, they could use several different action strategies.

The Dependent Variable: Interdependence

The concept of interdependence has a fairly standard definition in the organizational literature. We use Litwak and Rothman's (1970): "By interdependence we mean that two or more organizations must take each other into account in order to achieve their individual goals ... that the acts of one organization affect those of another in an immediate way" (p. 147). We propose a continuum of organizational interdependence in CPE along which six qualitatively different orientations can be identified. Although finer distinctions may be identified within the six, the continuum is intended to include all possible ways that two or more providers can interact with one another. We wish to highlight the assumption that this is a descriptive, not a prescriptive framework. We do not assume that greater interdependence is a more highly valued or successful orientation than less interdependence. The six orientations are given below.

1. Monopoly. In this orientation, a provider is the only one of its type (e.g., university) in a service area or is the only one that can program in a certain content area. This kind of situation can occur because of circumstance or tradition or can be mandated by a higher authority, such as a board of higher education. In this orientation, the least common of the six, one provider need not take any other provider into account in planning a CPE program.

2. Parallelism. Cross (1981) suggests that CPE providers can run parallel operations: "Each went along its well-defined paths. Many educators still act as though parallelism still predominates. Plodding along their own paths, they pretty much keep to themselves, quite unaware of travelers on other pathways" (p. 2). Occasionally, a provider would find that others are offering the same kind of programs, but would continue on the assumption that the market was large enough for more than one provider. In this strategy, there is almost no interdependence and what does occur results from chance encounters among providers.

3. Competition. Many cite competition as a possible action strategy for CPE providers (Beder, 1984). In this orientation two or more providers offer CPE programs on a specific topic with full knowledge that others are doing the same. While there is a substantial number of potential participants, neither provider will suffer program cancellations or loss of prestige. However, in many cases there is a limited number of participants and conflict between the two providers results. While the providers are not working together to achieve mutual goals, the acts of one

organization can dramatically affect the other in an immediate way.

4. Cooperation. Lindsay, Queeny & Smutz (1981) have made useful distinctions among points 4, 5, and 6 on the continuum by drawing from the organizational literature. Cooperation refers to the strategy where providers assist each other on an ad hoc basis. One provider, for example, may offer a mailing list or list of potential speakers to another. This represents a greater degree of interdependence than points 1 through 3 because the two providers are working together, albeit on a limited basis, in offering a CPE program. Our own experience suggests that this is a common form of interaction among CPE providers although its incidence has never been researched.

5. Coordination. In this orientation providers insure that their activities take into account those of others on a consistent basis. The coordination of educational services can occur by mandate from a higher authority, by interorganizational agreements, or by what Cross (1981) defines as a second form of parallelism: "It is the model in which each provider performs a unique function within well-defined boundaries. ... In the jargon of the trade, this is known as seeking the 'market niche' which means simply that providers who are potentially competitive will seek the unique service where competition is weak or non-existent" (p. 3). This strategy requires a high degree of interdependence among providers. The major difference between this orientation and collaboration is that in the latter, the providers work together on a single program.

6. Collaboration. Collaboration refers to providers "working together jointly and continuously on a particular project towards a specific goal" (Lindsay, Queeny, & Smutz, 1981). When people speak of high degrees of interdependence, this is the form of interaction that they usually have in mind. The most common example of this form is cosponsorship of a program by two or more providers. However, there is a great deal of variation in the nature of the agreements between providers, depending on their degree of formality and the organizational level at which they are negotiated. Thus, collaborations may be bound together by informal agreements or legal contracts.

The Independent Variables: Motivators and Determinants

Motivators

Motivating conditions influencing interorganizational interdependence derive from benefits potentially associated with such activities (Schermerhorn, 1975).

1. Providers will seek out or be receptive to interorganizational cooperation when faced with situations of resource scarcity or performance distress (Schermerhorn, 1975, p. 848). This is well-supported in the general organizational literature (Mulford, 1984) and is consistent with theory and research in continuing education (Lindsay, Queeny, & Smutz, 1981). Schermerhorn says that providers may be favorably predisposed toward cooperative relationships where there is a

need to gain access to otherwise unavailable resources, free internal resources for alternative uses, or more efficiently employ existing resources.

2. Providers will seek out or be receptive to interorganizational cooperation when "cooperation" per se takes on a positive value (Schermerhorn, 1975, p. 848). This positive valuing may arise from internal organizational conditions or supra-system norms. This is the factor that Beder (1984) terms "goal orientation" and was found by Cervero (1984) and Fingeret (1984) to influence the extent of interdependence among providers.

3. Providers will seek out or be receptive to interorganizational cooperation when a powerful extra-organizational force demands this activity (Schermerhorn, 1975, p. 849). Such demands may stem from governments or third party organizations such as insurance companies. Fingeret (1984) found this to be a powerful motivator when the Nuclear Regulatory Agency forced utility companies to cooperate with universities in training their engineering employees.

Determinants

1. To the extent that providers' boundaries are open and permeable vis-a-vis the external environment, they are more likely to employ interorganizational cooperation as a strategy (Schermerhorn, 1975, p. 850). Beder (1984) also found this to be a major determinant of cooperation. Furthermore, the Penn State project (Smutz & Toombs, 1985) provides strong empirical evidence for this proposition in its study of boundary spanners.

2. Under conditions where two or more providers experience and recognize some mutual need or purpose, and organizational domains are not sensitive issues, they are more likely to employ interorganizational cooperation as a strategy (Schermerhorn, 1975, p. 851). For this to occur two conditions need to be met. The providers' domains or official goals must be complementary rather than similar. Schermerhorn explains: "Since official goals relate an organization to specific input and output domains, goal similarity at this level might well imply competition as opposed to cooperation" (p. 851). As an example of this principle, Cervero (1984) and Knox (1982) both found that universities generally do not cooperate with each other even when they have extensive relationships with other types of providers. Schermerhorn (1975) continues: "... interorganizational cooperation appears more likely in situations where organizational domains are not sensitive issues (complementary official goals) and where mutual performance objectives are perceived (common operative goals)" (p. 851).

3. To the extent that physical opportunity for interorganizational cooperative activity exists within the provider and/or its external environment, it is more likely to use interorganizational cooperation as a strategy (Schermerhorn, 1975, p. 852). The geographical proximity of potential partners was found by Cervero (1984) to be an important correlate of cooperation among continuing education providers. An important

determinant at the intraorganizational level is a provider's capacity to build and support cooperative activities. Schermerhorn suggests that the relevant factors for this determinant include a provider's existing level of cooperative activity, the availability of slack resources to build and explore cooperative ventures, and the ability to mobilize these resources for application to interorganizational cooperation.

Some Preliminary Hypotheses

1. If none of the three motivating conditions are present, a CPE provider would have no interest in highly interdependent relationships. Thus, the provider would most likely engage in strategies that we termed monopoly, parallelism, or competition.

2. If at least one of the motivating conditions is present but none of the determinants, a CPE provider might see the possibility of highly interdependent relationships but would not receive that extra push to view them as a preferred action strategy. Thus, the decision-maker would most likely engage in one of the first three strategies.

3. With at least one motivator and one determinant, a CPE provider would seek out or be receptive to highly interdependent relationships and would most likely engage in strategy 4 (cooperation), 5 (coordination), or 6 (collaboration). As more motivators and determinants are perceived by the decision-maker the likelihood of entering highly interdependent relationships increases.

As a final note, we would draw attention to the assumption that the relationships between the independent and dependent variables of the framework are statistical rather than deterministic. Although the likelihood of providers forming highly interdependent relationships when no motivators or determinants are present is low, it is possible.

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THE AGING WORKER'S POTENTIAL AND TRAINING PRACTICES

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Abstract: A review of the literature of the cognitive potential of aging adults (those 45 years old and over) and of their ability to adapt to the technological and structural changes of the workplace is presented and compared with the results of two case studies of the current training practices of two large organizations.

Statement of the problem: All sectors of the economies of industrialized countries are affected to some degree by structural and technological change (OECD, 1984). Although the impact of this change on employment structures, skill requirements and perceived training needs may differ within countries and within industrial sectors, the proportion of aging workers who will have to acquire new knowledge and skills to adapt to a constantly evolving workplace will increase as the population ages. Inevitably, this situation creates a considerable challenge for all organizations which will have to develop strategies to update the competence of the workforce to maintain and increase productivity.

Moreover, if flexibility of retirement, considered to be a major problem for the near future (Babic, 1984), is taken into account, the challenge of training aging workers appears to be even more crucial as an ever greater number of employees may decide to continue working after 65 or even 70 years of age, should they have the opportunity to do so. Studies have shown that, if they are given the choice to work full time or part time after they reach the age of 65, workers tend to postpone their retirement (Bosworth & Holden, 1983; Mc Donald & Wanner, 1982; Sheppard, 1984). Consequently, this will evidently contribute to the aging of the workforce taken as a whole and will lead employers not only to review the contents of jobs which older workers can manage as well as retirement conditions offered to these employees, but also their training policies and practices concerning aging and older workers.

The restructuring of the workplace brought about by new technology and fierce competition for the world markets and the attendant changes in the nature of individual tasks require that workers are both individually and collectively able to develop broader abilities to understand complex systems and to manage more integrated and flexible installations (Dubar,

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1985). This situation calls for retraining programs and in some cases, extensive ones. When an organization is faced with the problem of retraining its workforce, older workers may be at a disadvantage in terms of access to training opportunities. But even when no structural barriers exist, that is when being older does not prevent participation in these programs, retraining may still be unsuccessful because of the workers' former training and of the general belief, this time on the part workers themselves, that learning ability decreases progressively with age.

Since little attention has been given to training and retraining in the context of aging, it appeared relevant to focus on aging workers, those who are, according to the criterion of the International Labor Organization (Bureau international du travail, 1984), 45 years of age or older. Thus, the overall objective of the research was to study the training of aging workers. The following three questions were addressed: 1) What is the learning potential of aging adults?; 2) Are aging and older workers able to develop the knowledge and skills required by technological change? 3) What are the training policies and practices of employers regarding aging workers? It was assumed that answers to these questions were a prerequisite to further investigation of efficient training and retraining strategies for aging workers.

Method: The research was designed to substantiate both theoretically and empirically existing images of the aging adults' potential in regard to capacity for maintaining and developing knowledge and skills required for employment as well as updating professional competence. Data were collected through a review of the literature focussed on cognitive abilities and educability of aging and older adults, on their ability to overcome their obsolescence, both from a general perspective and from that of work, including perceptions of the aging worker within the workplace. Two exploratory case studies were also conducted within two large organizations to document the training policies and practices that are currently being applied in the case of aging workers.

The data bases used for the review of the literature were ERIC and Psychological Abstracts. The descriptors were the following: older adults or aging individuals; training or retraining; cognitive ability; workers. The most recent publications (books and reports) related to psychology of aging, educational or industrial gerontology and professional training were also reviewed. For purposes of analysis, the data were categorised into cognitive abilities and abilities related to work.

The two organizations which agreed to participate in the exploratory case studies were both located in the metropolitan area of Montreal. Both were faced with the challenge of continually adapting to a rapid rate of technological change. One of them was from the business sector and the other one was a public service organization subsidized by the State Government. Each of them had a human resource development unit

responsible for training employees. A total of nine Interviews were conducted with the personnel of these units (five persons in one instance and four in the other). All these persons had first-hand experience with training and seven of them had been transferred to the human resource development unit after many years of experience in other kinds of positions, mostly line. The semi-structured interviews were designed to explore the training policies of these organizations, the participation of aging workers in various training activities related to their jobs, the content of training and the strategies used, and the expected development of the training function. An analysis of the personnel files of forty aging employees who had been involved in training in the past two years had been planned as part of the research design, mostly to determine whether participation in training was related to performance ratings within the job held by the employee or as preparation for future assignments. It turned out that performance appraisal was practised only within the business organization; there is thus one set of this kind of data instead of two. Difficulties were encountered in gathering this information because of the company's policy regarding access to personnel files and complete data was made available for ten employees only.

Results: Data from the review of the literature are presented around two broad themes: the potential of aging adults and the adaptation of aging and older adults to the transformations of the workplace. With regard to the first theme, a summary of the findings allows for these three statements: First, the cognitive variables remain consistent throughout life. Support for this may be found in longitudinal studies (Schaie, 1984; Field & Weishaus, 1983). Second, the decline of fluid intelligence which is thought to be related to information processing does not prevent the development in maturity of the ability to organize and plan one's environment (Neugarten, 1977; Mason and Rebok, 1984). Third, the general effects of experience and the development of verbal intelligence during one's working life increase, in many work situations, the competence of older adults (Hunt & Hertzog, 1981). Moreover, research findings show that there are cognitive abilities which, in having an influence on the development of other abilities, may contribute to the general cognitive stability or development of aging adults. These abilities are problem-solving (Denney, 1980; Turner et al., 1981); Bennett & Eklund, 1983), cognitive complexity (Franz, 1983) and motor-cognitive flexibility (Schaie, 1984), the latter being related to fluid intelligence and being most critical. Differential training has been suggested for maturity and old age (Schaie & Parr, 1981), and the limitations with which education of aging individuals has to cope have also been identified. It follows that the question is not whether the aging can learn, but by what means they can best learn.

Concerning abilities related to work the same conclusion is drawn. Stereotypes about aging workers mostly concern their capacity to adapt to change with respect to lack of flexibility, diminished intellectual functioning (French, 1980), lower levels of performance in terms of creativity, motivation and quantity of work and reduced potential for

development (Rosen & Jerdee, 1977). The image of an increasingly incompetent aging worker, when compared to empirical data, appears grossly distorted. In the conclusion of their recent analysis of results of about twenty studies on the comparison between measured job performance of younger and older workers, Doering, Rhodes & Schuster (1983) could not find a clear association between age and decline or increase in performance. Because of contradictory results, it is also impossible to establish a definite judgment about the efficiency of training or retraining programs for aging workers. It appears that the needs of work organizations in terms of qualifications in chosen sectors have a greater influence on the updating of workers' knowledge and skills than the deficiencies in abilities may have, be they apprehended or real. According to Rosen & Jerdee (1985) and a number of others, prevention of occupational obsolescence even among the older employees is much less likely to occur when the organization has implemented a policy for the development of human resources.

Findings of the case studies reveal that expectations with respect to trainability were said to be identical for younger and older employees and the same training methods were being used with similar results, irrespective of age. Workers aged 45 and over were said to participate in training to the same extent as younger employees whenever modifications in work content required updating of knowledge and skills. Examination of personnel files for a small number of employees did confirm that older workers received regular training either to improve job skills which were considered inadequate, to update existing skills or to prepare for a lateral job transfer. Except for computer training, hardly any difference was noticed in behavior between aging and younger workers. However, the discrepancy between former training and the new contents to be learned as well as the confrontation in mixed groups between the experiential knowledge of the older workers and the theoretical knowledge of the younger ones were thought to put the older worker at a disadvantage but not always.

Conclusion and discussion: One must ask whether the kind of training and retraining which is aimed at an active group of adults without distinction as to age, as was the case in the two organizations studied in the exploratory case studies, does not ultimately have detrimental effects on the older worker. The International Labor Organization (Bureau international du travail, 1984) insists upon the necessity to adapt occupational training to the characteristics and needs of aging workers; appropriate training could either focus on non-cognitive factors or anticipate if not eliminate the diminishing capacity for learning and information processing in aging individuals.

Further questions and suggestions arise from the present research: In the two organizations studied, differences in the sectors involved (business versus public service), size, organizational structure and the proportion of the employees affected by technological change, distinguished one from

the other. Each of these factors partially determines the kind of training offered to employees over 45. The question remains as to how these factors condition the kind of training offered and the level of participation within the work structure.

Given that capacity to adapt rapidly to technological change may be the key to success for those involved in the production of goods and services and that the technology itself or its use may often be unique to a particular business enterprise, the content of what must be learned by all workers, including the older ones, can only be defined within the workplace. In such a context, control over what is to be learned and which categories of employees will benefit from retraining is completely in the hands of the employer. How does the worker, especially the older one, perceive the importance of retraining?

Relating this last question to the phenomenon of flexible retirement, it must be assumed that how the older worker perceives his work future has an influence on his perception of the value of retraining and his level of involvement and vice versa

Lastly, remembering the importance accorded to cognitive flexibility in the theories of cognitive psychology, we must inquire whether there is a difference in the capacity for retraining between those who have occupied repetitive routine jobs and those whose jobs are characterized by continuous change. For example, those working in areas sensitive to technological change, after having, through the years, successfully managed successive modifications in their job content, may well be better prepared to adapt to new changes, even major ones, than those whose job content remained basically the same.

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PERSPECTIVE TRANSFORMATION: A CRITICAL THEORY OR THE DISSOLUTION OF PRAXIS?

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Abstract

A close reading of Mezirow's theories on perspective transformation shows them to be unsoundly grounded in Jurgen Habermas' theories of communicative action.

Introduction

In a series of articles dating from 1978, Columbia University's Jack Mezirow has been moving toward an ever refined and increasingly complex articulation of a "critical theory of adult learning" or, as he later phrases it, "a critical theory of self-directed learning." In this paper we offer a developing critique of Mezirow's emerging theory, of his claims about the emancipatory dimension of perspective transformation and of his selective use of contemporary social theory, especially that of Jurgen Habermas.

Method

The method employed was a concept analysis of Mezirow's published canon from 1978 onward. We examined his ideas for their internal consistency and for their adherence to the principal theoretical source cited, that of Habermas. Concurrent with this analysis we studied the debate generated by Habermas' work for the questions this debate raises about Mezirow's selective adaption of Habermas.

A critical outline of Mezirow's theory

The principal data base for Mezirow's ideas derives from his empirical research into women's experiences of college reentry programs. As early as 1975 he links these experiences to perspective transformation (Mezirow, 1975).

While Mezirow's early references to perspective transformation are descriptive, his later work offers a fairly constant theoretical prescription:

Perspective transformation is the emancipatory process of becoming critically aware of how and why the structure of psycho-cultural assumptions has come to constrain the way we see ourselves and our relationships, reconstituting this structure to permit a more inclusive and discriminating integration of experience and acting upon these new understandings (Mezirow, 1981, P. 6).

In 1978 Mezirow initially posits "a theory of adult development and a derivation concept of adult education" (Mezirow 1978, P. 101). The essence of his theory suggests that adulthood involves movement along a "maturity gradient." In turn, this process is linked to advancement through a five stage, autobiographically derived, hierarchy of learning. The final stage of this *gradus*, learning "how we are caught in our own

history and are reliving it," is seminal to Mezirow's theory and, he states, "cardinal for adult development." A complementary concept he introduces here is that of "meaning perspectives", personal paradigms that refer to "the structure of cultural assumptions within which new experience is assimilated to and transformed by one's past experience" (*Ibid.*).

While this early work suggests that the fifth stage of learning about meaning perspectives is stimulated by life crises, Mezirow later adds a second, transitional path to perspective transformation. Thus perspective transformation may occur suddenly, when an existing meaning perspective cannot deal with a given situation, or gradually, by a series of small, uneven transitions. However, the mechanism by which perspective transformation occurs, "perspective taking", is more uniform: "taking the perspective of others who have a more critical awareness of the psychocultural assumptions which shape our histories and experience" (*Ibid.*, P. 109). Consequently, maturity is seen as a developmental movement during adulthood to meaning perspectives "that are progressively more inclusive, discriminating and more integrative of experience" (*Ibid.*, P. 106).

Perhaps the central claim Mezirow makes is that this developmental, maturational process is emancipatory. Accordingly, there recurs throughout his work a *topos* of social action: consciousness raising in the women's movement, contemporary North American social movements and the work of Paulo Freire are all cited as illustrations of "the pervasiveness of perspective transformation for social action" (*Ibid.*, P. 102-3). Through his assertion that perspective transformation and conscientization are synonymous, and through his use of Erwin Singer's delineation of contractual solidarity to show the possibility of social action, Mezirow implies that perspective transformation is both a necessary and sufficient condition of emancipation.

These claims are subsequently informed by an increasing reliance on Habermas' social philosophy. In 1981 Mezirow draws on Habermas' ideas about the way in which human interest generates knowledge. Habermas identifies three primary cognitive interests: the technical, the practical and the emancipatory (Habermas, 1971, P. 310-315). Although interrelated, each of these is in turn grounded in different aspects of social existence: work, interaction and power. Initially, Mezirow locates his ideas in the emancipatory domain, claiming both that the notion of emancipatory action is the same as perspective transformation, and that knowledge of self-reflection is synonymous with becoming critically aware of the cultural and psychological assumptions that have influenced one's life.

Following Habermas, Mezirow identifies two critical sciences, psychoanalysis and the critique of ideology, as not only appropriate methods for inquiry but also for education. Consequently, internalized cultural assumptions and unresolved childhood dilemmas are presented as two distinct but interrelated foci for perspective transformation. This adoption of "critical theory" ostensibly introduces new factors into perspective transformation, particularly the focus on ideology and false consciousness. To enunciate his "critical theory of adult education", Mezirow then presents a hierarchy of reflectivity which falls into two groups relating respectively to "consciousness" and "critical consciousness." These levels of reflectivity are loosely linked to models of adult psychological development with *theoretical reflectivity* presented as the final stage of maturation.

At this point Mezirow moves directly into the arena of adult education. Subscribing to the belief that "central to the adult educator's function is a goal and method of *self-directed learning*" (Mezirow, 1981, P. 21, original emphasis), he argues that in order to be self-directed, a learner must be aware of constraints on learning. His *Charter for andragogy* is offered as a program for an adult education designed to foster self-directed learning. This theme is pursued in Mezirow's recent work. Three interrelated but distinct functions (as opposed to domains) of adult learning are identified: the instrumental, the dialogic and the self-reflective. In turn, each has its own distinctive form of action: action is instrumental, communicative, and emancipatory. Habermas' concept of discourse is located within the dialogic arena while Mezirow's earlier ideas on critical reflection re-emerge in the self-reflective arena. Mezirow claims of the latter that the knowledge gained is appraisive and enables one to more clearly see and understand reality and to integrate experience (Mezirow, 1985b).

In his most recent writings, Mezirow depends increasingly on Habermas's theory of communicative competence, suggesting that Habermas' ideal conditions for discourse are at the same time the conditions of an ideal of "enlightened self-directed learning" (*Ibid*, P. 144). Given that, along with "the ability to reason argumentatively and reflectively", self-knowledge is one of the prerequisites for participation in ideal discourse, Mezirow suggests a link between meaning perspectives, perspective transformation and adult education: adult education fosters the ideal conditions of discourse by helping learners move towards more authentic meaning perspectives.

Some problems in Mezirow's theory

For us, the fundamental problem in Mezirow's work is the lack of a coherent, comprehensive theory of social change, a lack diffused throughout the internal structure of his theory, evident in his selective interpretation and adaption of Habermas, and partially dependent on problems within Habermas's own work.

An initial problem is Mezirow's empirical data base. We doubt that the experiences of a selective group of women in one category of programs can be generalized in the way Mezirow attempts. More importantly, while we acknowledge that the internal dynamics of women's reentry programs are complex and defy oversimplified reduction, these programs are generally located within a personal mobility model. Mezirow gives tacit recognition to this fact in his summary description of such programs (Mezirow, 1978: 102). The inherently liberal character of these programs is also reflected in the range of possible outcomes suggested by Mezirow as the culmination of the perspective transformation process. It seems that women's "reintegration into society on the basis of conditions dictated by the new perspective" can be anything from pursuing a new career to a vaguely defined collective action. This essentially adaptive view of emancipatory action is in part disguised by Mezirow's strategic embedding of his women's reentry studies into a context of radical action. But the claims made for perspective transformation with respect to such action are only suggested, never demonstrated.

One source of Mezirow's difficulties is his use of Habermas' *Knowledge and human interests*, from which he derives the three learning domains. Mezirow makes the extraordinary claim that "as educators, we need not concern ourselves with the philosophical question of whether Habermas has succeeded in establishing the epistemological status of the primary knowledge-constitutive interests with categorically distinct object domains" (Mezirow, 1981, P. 17). This proposition is untenable. First, it suggests that educators, at least adult educators, should not concern themselves too

much with theory - a strange claim in an article purporting to offer "a critical theory". Second, a number of flaws have been identified in Habermas' earlier work, a point acknowledged by Habermas. Third, as Mezirow incorporates aspects of Habermas' epistemology into his own, his theories cannot escape critical reappraisal when their epistemological assumptions are called into question.

Several commentators within the tradition of critical theory have drawn attention to some problems with the theory of cognitive interests. Discussing "emancipatory interests", McCarthy (1978) highlights the difficulties inherent in Habermas' concept of self-reflection. He argues that Habermas collapses two distinct concepts of self-reflection into one: (1) reflection on the subjective conditions of knowledge and (2) self-reflection on the way in which our own world view has been socially constructed. The latter concerns "reflection on the specific formative history of a *particular* (individual or group) subject; its goal is a restructuring of the subject's own action-orienting self-understanding through liberation from self-deception" (*Ibid*, P. 95, original emphasis). Mezirow appears, most of the time, to be employing this second concept of self-reflection, but at times he seems to reiterate Habermas' conflation of the two concepts into one. Bernstein (1985) notes three other frequently mentioned flaws: (1) the quasi-transcendental status of cognitive interests; (2) the basic inadequacy of the initial systematic synthesis; (3) the promise of a theory of action that has not been realized.

In the attempt to correct some of the problems of his earlier work, Habermas has engaged in a paradigm shift. "Basically one could say that Habermas has 'translated' the project of a critical theory of society from the conceptual framework of a philosophy of consciousness, geared to a subject-oriented model of cognition and action, into the conceptual framework of a theory of language and of communicative action" (Wellmer, 1985, P. 51). As Giddens (1985) observes, it now seems that Habermas has abandoned the idea that knowledge is grounded in interest.

Mezirow appears unaware of the difficulties created by this shift in Habermas' position and attention. As Habermas has developed his theory of communicative action, Mezirow has sought to assimilate these unfolding ideas into his theories of adult learning and education. Like Habermas, he too has shifted to a paradigm of language. In his later works Mezirow de-emphasises politico-educational goals which he now describes as "instrumental" in order to concentrate on fostering the ideal conditions of discourse (Mezirow, 1985c). Yet at the same time he tries to retain for emancipatory adult education a social action dimension. Mezirow seems to be seduced by the utopic vision in Habermas' more recent work. In uncritically assimilating Habermas' theoretical shift into his own theories, Mezirow carries over into his writings the very epistemological problems he says adult educators need not concern themselves with.

The shift into a paradigm of language also presents Mezirow with a number of other problems. It will be recalled that Habermas' ideal conditions for discourse constitute Mezirow's ideal conditions for self-directed learning. Discourse requires a symmetrical relationship between participants, yet that such symmetry needs to be fostered through perspective transformation implies an asymmetrical relationship. Thus the adult educator's role is clearly that of an organizer of enlightenment. But this in turn raises questions about the nature of that enlightenment, about its normative dimension, a problem most evident in

Mezirow's discussion of perspective taking.

As previously indicated, Mezirow suggests in 1978 that perspective transformation is effected by "perspective taking": "taking the the perspective of others who have a more critical awareness of the psychocultural assumptions which shape our histories and experience." This raises several questions: first, how does one recognize those who have "a more critical awareness"?; second how does one identify the "psychocultural assumptions" that shape one's history and experience?; third, what is the relationship between these psychocultural assumptions and their social origins?. At various points in his work, Mezirow talks about "ideology", "false consciousness", "reification" and he even introduces a marxian notion of alienation, but at no stage does he weave these notions into a critique of the dominant ideology or relate them to the structure of psychocultural assumptions.

These problems are compounded by the absence in Mezirow's work of an adequate theory of social change, despite his casual equation of perspective transformation with both "consciousness raising" and "conscientization". As Butterwick (1987) acutely demonstrates, women's movement facilitators and Freirian co-investigators have an overtly political perspective and agenda: critique, educational activity and social action are inextricably and indeed reciprocally linked. In contrast to this, Mezirow's theory of perspective transformation allows for a greater degree of political detachment. Indeed, Mezirow is never clear about the nature of collective action and the bases on which people come together. At times he is firm about the need for collective political action, at other times he relegates it to the realm of mere possibility leaving us with the impression that emancipation can be realized without social action.

Typically, Mezirow fails to acknowledge the difficulty of fostering conditions of ideal learning in a social environment in which structural inequalities are entrenched. Heller (1982) makes a point in her critique of Habermas which we think applies equally to Mezirow. She argues that the use of force in labor union strikes or in demonstrations against particular policies or events represents action taken on behalf of argumentation. That is, it is "only in situations of momentary equality of power" that the oppressive party is required to engage in reciprocal argument. In this sense, social action is a necessary prerequisite for emancipatory discourse. She also highlights the ways in which the process of enlightenment occurs within social movements: "class struggle *and* enlightenment occur at the same time...because the conscious aim of action is (at least partially) an enlightenment process which will counterbalance the distorted communication of the media" (Heller, 1982, P. 28, original emphasis).

Conclusions

We agree with Leon Levitt (1978), that Mezirow's claims to have a theory are pretentious. While we agree that Mezirow's research into women's reentry programs provides relevant and useful insights, he has never established that the results of this research can be generalized. At best, he presents mere fragments of a theory of adult learning and education or self-directed learning. Further, it is difficult to see how these ideas can be located within the tradition of critical theory when they are largely devoid of the socio-political critique that lies at the heart of that tradition. Finally, his failure adequately to address questions of context, ideology and the radical needs embodied in popular struggles, denies

perspective transformation the power of an emancipatory theory. Thus we conclude that the essentially liberal democratic character of Mezirow's ideas inevitably suppress the concept of a radical praxis such as that advanced by Freire and other proponents of transformative education (Law and Sissons, 1985).

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THE INTERACTION OF TEACHING STYLE AND LEARNING
STYLE ON TRADITIONAL AND NONTRADITIONAL LEARNERS

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Interactions of teaching style and learning style upon a group of traditional and nontraditional allied health students indicated that student characteristics may influence the effectiveness of various teaching styles.

Introduction

One major area of focus in the adult education literature has been teaching style and learning style. While many studies have been descriptive in nature, recent studies have begun to relate style directly to student outcomes. This study contributes to this trend by examining the interaction of teaching and learning styles on student academic success. By investigating different types of students in higher education, it explored the degree to which the general adult education literature is applicable in this setting.

Methodology

Allied health training is provided at Southwest Texas State University in two formats. Many students are practicing professionals who return to school in nontraditional ways such as attending courses in the evening and on week-ends at both the university's main campus and at satellite centers in three other cities. Others attend the traditional daytime classes on the main campus. An ex post facto survey design was used to investigate teaching and learning styles in this program. The independent variables were the student's learning style and the respective instructor's teaching style. The dependent variable was the student's achievement as measured by final course grade. This grade was adjusted for individual differences in ability to succeed in college by comparing it to the student's overall grade point average, which is an indicator of the student's past performance in the college setting. General demographic information for the students included status as either a traditional or nontraditional student, age, and gender. General demographic information for the instructors included age, gender, years of teaching, years of teaching at the university, and educational preparation. The null hypotheses for this study tested the interactions between the status as either a traditional or nontraditional student and the independent variables of learning and teaching styles on the dependent variable of academic achievement.

Data were collected from 256 nontraditional and 82 traditional students. Instructor data were collected on 32 instructors. The independent variables of style were measured by the Canfield Learning Style Inventory (CLSI) and the Principles of Adult Learning Scale (PALS). Analysis of covariance was used.

The CLSI (Canfield, 1983) is a 30-item instrument which conceptualizes learning style as composed of the elements of preferred conditions, content, and mode of learning and of the expected level of success. The preferred conditions of learning consist of the eight factors of Peer, Organization, Goal Setting, Competition, Instructor, Detail, Independence, and Authority. Preferred content contains the scales of Numeric, Qualitative, Inanimate, and People. Preferred mode has the scales of Listening, Reading, Iconic, and Direct Experience. Expectancy has four levels which range from expecting to do poorly to confidence in performing in a superior manner in the learning activity. The learning style scores were categorized in the following percentile ranges: Low = 1-10; Moderately Low = 11-39; Moderate = 40-69; Moderately High = 70-89; and High = 90-99.

PALS (Conti, 1982) is a 44-item summative scale based on principles in

the adult education literature. It gives an indication of an instructor's overall preference for teaching behavior in an adult education setting. High scores on PALS reflect a learner-centered approach to the teaching-learning transaction. Low scores on PALS denote a preference for the teacher-centered approach in which authority resides with the instructor. It contains the seven factors of Learner-Centered Activities, Personalizing Instruction, Relating to Experience, Assessing Student Needs, Climate Building, Participation in the Learning Process, and Flexibility for Personal Development (Conti, 1985, pp. 9-10). Teaching style scores were categorized as follows: Moderate = between the mean and .5 standard deviation; Intermediate = between .5 and 1 standard deviation from the mean; and High = at least 1 standard deviation from the mean. The mean for PALS is 146 with a standard deviation of 20.

Findings

Data were collected from all students enrolled in 12 and 16 week courses in the allied health program. When duplicated to match their true attendance in class, the total number of students for this study was 824; 71% of the enrollment was in the nontraditional program. The group was predominately female (70%). The average age was 34 for the nontraditional group and was only 23 for the traditional group. The nontraditional group had an overall accumulated grade point average of 3.31 while the grade point average for the traditional group was 2.96. In the allied health area, their averages were 3.52 for the nontraditional group and 3.07 for the traditional group.

The interaction between learning style and the student's status as either traditional or nontraditional student was examined in two ways. First, scores on each of the individual subscales of the CLSI were examined allowing for categorization by the original percentile scores. Second, the student's dominant style in each area was identified by the highest score in each area.

Significant interactions were found in 7 of the 20 learning style subscales. In the area of preferences for conditions, two scales showed significant differences. These were Organization ($F = 1.57$, $df = 4/813$, $p = .008$) and Detail ($F = 3.51$, $df = 4/813$, $p = .008$). The scores for Organization indicated that a high preference for having course work logically and clearly organized interacted with the groups to produce high grades. Likewise with Detail, a moderately high and high preference for specific information concerning classroom details related to assignments, requirements, and rules interacted with the groups in attaining higher grades. Canfield suggests that these two scales can be paired and retitled as a preference for Structure. Although Canfield argues that each of the scales in the conditions area can be paired with one other scale and renamed for a broader concept, the Structure scale is the only one which was confirmed as valid in a follow-up analysis of the Canfield Learning Style Inventory (Conti & Fellenz, 1986, p. 73).

While no significant interactions were found in the areas of preferences for content, two significant interactions existed in the area of preference for the mode of learning. They were Listening ($F = 3.80$, $df = 4/813$, $p = .005$) and Direct Experience ($F = 7.33$, $df = 3/814$, $p = .001$). A very high preference for learning information by hearing information by such means as lectures, tapes, and speeches was interdependent with the groupings in attaining high grades. An examination of the CLSI indicated that this is passive behavior. It is far different student behavior than that which requires the student to actively combine the auditory senses with some kind of physical motion modality (Hoffer, 1986, p. 144).

Direct Experience refers to a preference for learning by handling things or by performing activities. This indicates a fondness for practical exercises, field trips, and laboratory activities. An extremely low preference for learning by direct experience interacted with the status grouping to produce

high grades. While nontraditional students who had a moderately strong or a strong preference for learning by direct experience were able to obtain extremely high grades, the grades decreased precipitously for traditional students as their preference for direct experience increased.

In the area of expectancy, three of the four scales indicated a significant interaction with group status. They were Superior Expectancy ($F = 4.50$, $df = 4/813$, $p = .001$), Satisfactory Expectancy ($F = 4.12$, $df = 4/813$, $p = .003$), and Unsatisfactory Expectancy ($F = 4.24$, $df = 4/813$, $p = .002$). A high expectancy to do superior work interacted with group status to produce high grades while a very high expectancy to do unsatisfactory work was associated with low grades. A moderately low and low expectancy to do only average work interacted with group status to indicate high grades. While nontraditional students who expected to do average work scored slightly above the overall mean (3.39) for all those in the study, the traditional group scored one full letter grade below this average.

In addition to examining a learners score on each of the 20 subscales of the CLSI, it is possible to label the learners' dominant learning style based on their highest score in each of the areas of conditions, content, mode, and expectancy. Significant interactions were found in two of the four areas when group status as either traditional or nontraditional student was also considered. In the area of preferred conditions of learning, the dominant style of Structure ($F = 3.75$, $df = 3/803$, $p = .011$) with its preference for logical, orderly, and well-defined instructional procedures interacted with group status to produce high grades. Although the means for all dominant styles for the nontraditional group were high (3.56) and rather consistent, the mean increased greatly for those in the traditional group with a dominance in Structure. An interaction was also found between dominant mode and group status for the preferred mode of Listening ($F = 3.48$, $df = 3/780$, $p = .016$). Although the learning achievement was near the group mean for those with a dominant Listening style in the nontraditional group, the highest academic achievement for the traditional group was by those with this dominant style.

No significant interactions were found in the dominant styles of preferred content for learning ($F = 1.98$, $df = 3/774$, $p = .116$) and expectancy ($F = 2.18$, $df = 3/771$, $p = .089$). However, an analysis of the nearly significant expectancy means indicated a trend in which the expectancy to do superior work interacted with group status to show high grades.

The 32 instructors in the study averaged 11 years of teaching experience with 7 years of teaching at the university. The average age was 44. The group had 18 males and 14 females. All but two held at least a masters degree, and five had obtained a doctorate. The instructors teaching the nontraditional students were older (50) and had slightly more experience both at the university (8) and in teaching (12) than the teachers for the traditional group (age--37; university experience--6; teaching experience--10). They were also better educated with 16% holding a masters degree, 59% having additional hours beyond the masters, and 25% holding a doctorate. For those teaching the traditional students, 14% held a bachelors degree with additional credit, 71% had a masters degree, 7% had hours beyond the masters, and 7% had a doctorate. In gender, the group teaching the traditional students was evenly divided while those for the nontraditional group were predominately male (63%).

The two groups differed significantly in their teaching style ($F = 25.45$, $df = 1/30$, $p = .001$). Those teaching the nontraditional students had a mean score of 138 on PALS while those teaching traditional students averaged 113. Both groups were thus teacher-centered with those teaching in the daytime program scoring similarly to secondary education teachers tested with PALS (Conti, 1985, p. 8).

Two-way analysis of variance for the learning style variables uncovered differences that would not have been evident in simple one-way analysis. For six of the nine cases in which interactions were found, the main effect of the learning style variable was not significant. This was not the situation with teaching style. An analysis of variance for the traditional group indicated a significant difference in achievement due to teaching style ($F = 4.41$, $df = 5/233$, $p = .001$) similar to that found in the nontraditional group (Welborn & Conti, 1986). However, a shift occurred in the moderate teacher-centered group. While it was below the mean for the previously examined nontraditional group, it was above the mean for the traditional group in this separate analysis. A two-way analysis of the total group confirmed these separate calculations. The significant interaction between teaching style and group status as either traditional or nontraditional students ($F = 7.13$, $df = 4/814$, $p = .001$) indicated that the effectiveness of each teaching style was not the same for both groups. While the moderate learner-centered approach was most effective for the nontraditional group, the moderate teacher-centered approach produced the highest gains for the traditional group. This was the only teaching style area in which the traditional students (3.53) achieved higher grades than the nontraditional students (3.46). An investigation of simple effects indicated a significant difference in the academic performance of the groups in both the high teacher-centered style ($F = 11.57$, $df = 1/337$, $p = .001$) and intermediate teacher-centered style ($F = 9.80$, $df = 1/136$, $p = .002$). With both styles, the nontraditional group scored higher than the traditional group. Because of the extremely low number of students in the traditional group experiencing learner-centered approaches, it was not feasible to examine simple effects for the learner-centered styles.

In examining the factors that compose the subscales of PALS, interactions were found in four of the seven scales. Interactions were not found in the areas of Learner-Centered Activities, Climate Building, and Flexibility for Personal Development. However, in the area of Personalizing Instruction ($F = 16.62$, $df = 3/817$, $p = .001$) the intermediate teacher-centered approach was the most effective for the traditional students. In this area, the only other style that the traditional students experienced was a high teacher-centered approach. Although no style was any more effective than the other in this area for the nontraditional students, their lowest achievement was with the intermediate teacher-centered style.

The three other significant areas were Relating to Experience ($F = 3.56$, $df = 4/761$, $p = .014$), Assessing Student Needs ($F = 3.54$, $df = 4/788$, $p = .007$), and Participation in the Learning Process ($F = 6.55$, $df = 4/813$, $p = .001$). While an interaction occurred with the moderately teacher-centered approach, traditional students were far less successful with the moderately learner-centered instructors who encouraged relating learning activities to their prior experiences. In the areas of assessing needs, all styles were almost equally as effective for the nontraditional learners, but the intermediate teacher-centered approach produced the greatest academic achievement for the traditional students. Finally, in involving the learner in determining the nature and evaluation of the content material for the class, the intermediate teacher-centered approach resulted in fairly high academic achievement for both groups. The nontraditional learners also had high scores with the other teaching styles. However, the mean level of academic achievement dropped drastically for the traditional students (2.36) while it remained high for the nontraditional students (3.66) with the moderately learner-centered style.

Because of the age differences in the two groups, age was examined as a variable. When grouped by 10-year intervals from age 20 and when tested as the only independent variable, age did not make a difference ($F = .55$, $df = 3/819$,

$p = .65$). However, a subsequent two-way analysis indicated an interaction between age and teaching style ($F = 2.04$, $df = 12/803$, $p = .019$). While all styles were almost equally as effective for all three groups over 30 and while interactions occurred with the moderate teacher-centered, moderate learner-centered, and intermediate learner-centered approaches to raise the grades of the youngest group to the level of the other students, the group under 30 achieved at its lowest level under the intermediate teacher-centered approach and scored over one-half grade point less than the other groups when experiencing a high teacher-centered approach.

The relationship between teaching style and the educational level of the instructor upon student achievement was also explored. A significant interaction ($F = 7.93$, $df = 4/754$, $p = .001$) indicated that student achievement was not greatly affected by teaching style except in the category of high teacher-centered. Here, the students of the teachers with only a masters degree scored a half a grade point less than those where the teachers had training beyond the masters, and they scored nearly a full grade point below students of teachers with a doctorate. The increased training and knowledge level of the teachers was thus associated with improved student performance.

Discussion

As with several previous studies, teaching style as measured with PALS made a difference in student achievement. Brookfield (1986) has suggested that adult educators are not just passive facilitators servicing adult learners. Quite the contrary, they are active individuals who have specific values and needs and who influence the teaching-learning encounter. The findings from this study support Brookfield's thesis and emphasize that teachers have varying effectiveness in how they influence this learning. However, the findings support Brookfield's thesis and expand the teaching-style research in another way. By examining interactions, these findings indicate that student characteristics must also be considered when evaluating the effectiveness of the teaching-learning encounter.

Students differ in their maturity upon entering a learning situation. Leadership theory has referred to this type of maturity as "the level of achievement-motivation, willingness and ability to take responsibility, and task relevant education and experience of an individual or group" (Hersey & Blanchard, 1974, p. 28). Demographic information indicated that the nontraditional students who were older and already practicing professionals had the potential for entering the course work with a greater degree of achievement-motivation and more task relevant experience. Likewise, the teachers for the nontraditional group probably had gained additional field experience. While they had nearly the same amount of teaching experience as the teachers of the traditional group and had a few more years preoccupied with gaining a formal education, the age difference between the two groups was 13 years. Experience gained during these additional years could be valuable and diverse aids for working with students also experienced in the field.

The learning style findings suggest that the traditional students can be viewed as less mature than the nontraditional students in determining their leadership needs. They have a strong preference for passive listening; they do poorly if they have a preference for direct experience; their performance declines greatly when teachers rely on them to relate classroom activities to their own experience. They achieve best when they have a dominance for structure. They clearly perform best within the required standards when the teacher provides the degree of control that they desire.

On the other hand, the nontraditional students learn best with the learner-centered approach. Most of the learning style factors did not affect them. Yet, by giving students a greater degree of responsibility for their own

learning, by relating classroom activities to student experiences, and by allowing students to participate in the learning process, teachers using the learner-centered approach fostered group maturity which led to greater academic success for their nontraditional students.

Hersey and Blanchard imply that maturity is not a value-laden term. Rather, it is a measure to determine the type of leadership that should be given to a group (pp. 28-29). As maturity declines, the amount of leadership authority needs to be increased; as maturity increases, interpersonal activities can be increased. Findings from this study support this approach with teaching adults. They also support Pratt's (1984) contentions that learner characteristics must be considered in selecting classroom teaching techniques.

The findings also support the implication in psycho-social definitions of adult education (eg., Darkenwald & Merriam, 1982, p. 9) that adulthood needs to be identified by factors other than age. Although the groups differed greatly in age, this difference had absolutely no influence on their performance. However, when they were classified by the traditional or nontraditional status which resulted from life role factors influencing their method and purpose of seeking education, significant differences were found. These differences clearly indicate that higher education and adult education are different concepts. While the ideas from the adult education literature can be applied successfully to adult students functioning at mature leadership levels, the same techniques are not as successful for less mature adults in higher education who lack a richness of experiences and who desire the structure of a controlled environment to provide them with basic knowledge.

Thus, teaching style remains a crucial factor in the teaching-learning encounter. However, its effectiveness does not operate in isolation; it interacts with learner characteristics. Future studies should strive to explore these interactions in various adult education settings and to describe the exact nature of the dynamics of these interactions.

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EVERETT DEAN MARTIN: SPIRITUAL LEADER OF THE ADULT EDUCATION MOVEMENT IN THE UNITED STATES

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Abstract: One figure from the early years of the adult education movement in the United States who is conspicuously absent from the contemporary adult education literature is Everett Dean Martin. The purpose of the present study was to initiate an investigation into the contribution of Martin to the field of adult education.

With the death of Everett Dean Martin in 1941 the American Association for Adult Education (AAAE) lost one of its more eloquent voices. By the 1940s Martin was viewed by some members of the AAAE as the principal architect of the Association and author of its constitution (Miller, Creese, Rush, 1941, p.313). And, echoing the sentiment of these same individuals, Morse Cartwright (1941) considered Martin to be the "spiritual father" of the AAAE (p.324); such an honor implied that Martin was also viewed as the "spiritual father" of the adult education movement in the United States.¹ Martin was a prolific writer and lecturer and one of the major contributors to the Journal of Adult Education -- mouthpiece of the AAAE. (Day, 1981, p.126) Through his association with the AAAE, his guidance of the People's Institute in New York City, and his numerous publications, Martin was acknowledged by many as a major leader of adult education.

Webster Cotton (1968) has referred to Martin as "one of that small band of adult educators who effectively articulated the case for adult education in the period between the two world wars." (p.23) When The meaning of a liberal education appeared in 1926, published the same year as Eduard Lindeman's The meaning of adult education, Martin's book was proclaimed by Frederick Keppel (1927) as "the most important contribution to the understanding of adult education . . . thus far made in the United States." Yet today, while Lindeman's influence is ever present in the writings of the field of adult education, few authors take notice of Martin's contributions. In a 1980 study which focused in part on the familiarity of adult education graduate students with a selection of literature in their field, Day and McDermott found that 83% of the 245 students queried were not familiar with The meaning of a liberal education; only 4% had read it.² In a recent survey of the field of adult education (Darkenwald & Merriam, 1982) Martin is not even mentioned.³ The more popular histories of adult education by C. Hartley Grattan (1955)⁴ and Malcolm Knowles (1962)⁵ hardly refer to Martin. Given what appears to be his significant place in the early years of the adult education movement in the U. S. and what certainly seems to be his nearly total neglect today, the authors undertook this investigation in order to better understand the general contribution of Everett Dean Martin to the field of adult education.

Methodology

This study was primarily an archival and library review of the writings and work of Everett Dean Martin. The sources consulted for this investigation included most of the

major writings of Martin -- e.g., The behavior of crowds (1920), The meaning of a liberal education (1926), Liberty (1930), and Civilizing ourselves: Intellectual maturity in the modern world (1932); the numerous articles authored by him which appeared in the Journal of Adult Education, 1929-1940; Carnegie Corporation reports and communication pertaining to the founding of the American Association for Adult Education (AAAE); annual reports of the director of the AAAE; critical reviews of Martin's writings; as well as material regarding the People's Institute in New York City.

Through an examination of Everett Dean Martin's writings, work, and life the authors sought answers to the following questions:

- who was Everett Dean Martin?
- what did Martin view as the definition and purpose of adult education?
- what did Martin view as assumptions regarding the practice of adult education?

Biographical Background

Everett Dean Martin was born July 5, 1880 in the small midwestern town of Jacksonville, Illinois. He was reared in secure and modest, but not affluent, circumstances, in a middle American environment not unlike that of the young Harry Truman. Like his famous contemporary, he seems to have imbibed traditional values of hard work, seriousness of purpose, and loyalty to family and community, along with a strain of prairie populism, progressivism, and social concern.

Graduated from Illinois College in Jacksonville in 1904, he went on to McCormick Theological Seminary in Chicago in an era characterized by widespread social, economic, and political upheaval and by the emergence of the "Social Gospel" and the rise of liberalism in the churches. Into this setting he was launched as a newly ordained Congregational minister upon his graduation from the seminary in 1907. He served as pastor of the Unitarian Church in Des Moines, Iowa from 1910 to 1914. He then left the ministry to devote himself full time to writing and teaching on social (and philosophical) questions.

He began a long association with the People's Institute of Cooper Union in 1916. Developing a successful series of lectures on literature, biology, psychology, and other subjects for adults; he was known as a "scholarly, witty, and genial" teacher. (Dictionary of American Biography, 1945, p.511) He became director of the Institute in 1922 and among the junior lecturers he recruited was a young man named Mortimer J. Adler.

Martin was made Head of the Department of Social Philosophy during the Great Depression, when Cooper Union took over the financing of the Institute. He wrote extensively in social philosophy, social psychology, and politics, most notably in The behavior of crowds (1920), The meaning of a liberal education (1926), and Liberty (1930). As President of the American Association for Adult Education in 1937, he set the agenda for its famous eleventh anniversary conference. He died in 1941, while serving as Professor of Social Philosophy in the Claremont Graduate School in California.

Definition and Purpose of Adult Education

During the summer of 1924 Frederick Keppel, President of the Carnegie Corporation, proposed a meeting for the purpose of discussing the issue of adult

education. Among the 23 individuals invited to the Corporation's Fifth Avenue office in New York City were James E. Russell, Dean, Teachers College, Columbia University; Charles Beard, Historian; Linda A. Eastman, Librarian, Cleveland Public Library; Eduard Lindeman, Professor, New School for Social Research; and Everett Dean Martin, Director, the People's Institute. During the meeting a number of concerns regarding adult education were raised, one major concern being its purpose. In a memo forwarded to Keppel shortly after the meeting Martin suggests the purpose of adult education:

... that there may be a more enlightened self-disciplined public; that a larger number of people may learn to think more clearly and courageously; may become less opinionated; less the slaves of propaganda, fads, and catch words; and may achieve a higher degree of temperance of judgment; of respect for the values of civilization; and that there may be a larger number of persons in the community better able to solve the problems of our common life. (1924)

The need for a more enlightened public is a theme, a purpose for adult education, which would echo throughout the work and writings of Martin for the next seventeen years.

According to Martin, the proper emphasis of adult education is political, philosophical, and social. Adult education, therefore, is liberal education in the classical sense, learning that remains relevant from one age to the next because it is rooted in the great traditions of humanity. In Liberty (1930) he states

... The Greek idea is both modest and practicable. Liberties exist in the concrete. They are the specific rights of mature persons with independent and responsible intelligence, rights justified by experience and the logic of the situation, which the sovereign power has been forced to recognize and guarantee for the future by constitutional authority. (p.20)

Martin is in the tradition of individualistic liberal democracy that has its origins in Greek thought and that runs through the Anglo-American tradition from John Locke and the Founding Fathers through William James. He is critical of what he interprets as an overemphasis on socialization in the philosophy of John Dewey, although he is in general sympathy with the aims of progressivism in politics and education.

Like Dewey himself, Martin worries about vocationalism in modern education as a narrowing force in the life of the free citizen (1926, 1932b), as distinguished from vocational education as part of liberal education. He is very much of a Jeffersonian, as is Mortimer Adler today, in warning of the tendency to water down education in general and adult education as a phase of public education in particular. To cite Liberty again:

... Our education ought long ago to have had a liberalizing influence on the public mind. ... There is nothing in such a point of view that makes it intellectually difficult. But our educational institutions, under the pressure of every kind of popular prejudice, seem to be chiefly occupied in dodging controversial intellectual issues and equipping youth with those attitudes and techniques which promise material advantage. (p.304)

Adult Education, therefore, ought to liberate the intellectual, social, and moral powers

and potentialities of citizens. It should serve the dual purpose of personal cultivation and happiness and social responsibility and service.

As a "learned minister" steeped in traditional subject matter, and highly aware of centuries of great learning embodied in the Judeo-Christian and Greco-Roman heritage, Martin appears in a certain light as what we would call a perennialist in philosophy of education. The purpose of adult education, as of all education, is to enlighten the free person so that he or she may make a worthy contribution to the ongoing march of civilization. In modern terms, this is a democratic purpose, rooted first in the individual. Martin has faith in the mature learner, when properly enlightened, to do the right thing. In his Presidential Address to the AAAE, "Politeia and Daimon," Journal of Adult Education (1937), he presents us with this challenge:

... What we as adult educators need to remember is that if men are not taught good philosophies, they are pretty sure to turn to bad ones. How can we meet this challenge? We can decline leadership and talk about something else. We can, if we wish, remove the intellectual content from adult education, as it already has been removed from a great deal of public education

We can, on the other hand, realize that as educators we are custodians of humanity's cultural inheritance. We can strive to keep that inheritance alive, to understand it and interpret it. (pp. 233-234)

Assumptions Regarding the Practice of Adult Education

To suggest that adult educators serve as custodians of humanity's culture is also to imply certain assumptions regarding the practice of adult education. In addition to Martin's firm belief that the learning process is never completed and that adult education is for us as well as for others (1926, pp.5, 46) the following are some other assumptions gleaned from his writings:

- Adult education is serious business and should not be taken lightly. "The only education that can prevent the development of this stultified and stultifying point of view (an inability to see beyond ones own desires) is adult education, mature education." (1932d, p.293)
- Adult education requires time and effort. "Education requires time. . . . But what people want is education without effort, ready-made education." (1926, p.17)
- Adult education is for life, not for livelihood. "Directly and immediately, it (adult education) is useless. It is a kind of living which is of value for its own sake, a personal achievement which possess intrinsic worth." (1926, p. 43)
- Books, lectures, and discussions are the most appropriate vehicles for adult education. "Books are the essential background for any educational program, and lectures and discussions are the best stimulus to reading. It is well for students to be reminded of the close relationship between these two sources of guidance in study." (1928, p.14)
- Adult education requires new methods and aims. ". . . it is hoped that adult education will give us new methods and aims which will be carried back into our schools and colleges and transform them." (1926, p. 5)

Conclusion

The kind of education envisioned by Martin nearly fifty years ago is even more relevant today, which is more and more characterized by conflict among ideologies and values. As a man influenced by the American frontier, growing up in the age of the young Carl Sandburg and Jane Addams' famous Hull-House settlement project, and by the gospel of social responsibility gaining great force in the liberal churches, Martin strikes us as an individualistic progressive. His progressivism was more akin to that of William James than John Dewey. Unlike Dewey and Eduard Lindeman, Martin believed the *primary* educational challenge of man to be personal enlightenment and not service to society. (Martin, 1937, p. 237) The educated individual -- who possesses and values qualities such as a commitment to learning throughout life, sincerity, humor, a sense of purpose, tolerance for the beliefs of others, doubt, being well informed, intellectual modesty, and who resists taking his or her own beliefs too seriously -- this kind of person, Martin believed, would also do good acts. Martin writes, "It is only as we can achieve the qualities of the civilized man that we can create a better social order . . ." (1937, p.240)

The 'Burning Torch' logo adopted by the AAAE in 1926 nicely illustrates Martin's influence. After all, his challenge to us as adult educators is quite similar to the challenge posed to the Olympian relay runner who must run with a lighted torch, keep it burning, and then successfully pass it along to the next runner: as custodians of a rich cultural inheritance our task is to develop into 'civilized' human beings, keep the richness of our culture alive, and then pass it along to following generations. This was the position of the AAAE when it was founded. According to its Executive Director (Cartwright, 1926), central to the mission of the Association and to adult education in general is the continuance of the "cultural process pursued without ulterior purpose." (p.3) This would remain the policy of the AAAE until its dissolution in 1949 -- indeed, a policy whose spiritual leader was Everett Dean Martin.

NOTES

¹ The AAAE proclaimed itself as the guardian, leader, and spokesperson of the adult education movement in the United States. The Association, for example, designated its chief benefactor, Frederick P. Keppel -- President of the Carnegie Corporation 1923-1941-- as 'the founder of the adult education movement in the United States' (Cartwright, M., 1936). Annual Report of the Director. AAAE. NYC: American Association for Adult Education, p. 7), specifically because he was the founder of the AAAE.

² In contrast Day & McDermott found that only 35% of the graduate students -- individuals who had already completed at least fifteen semester hours in their program -- were not familiar with Lindeman's The meaning of adult education and only 8% were not familiar Malcolm Knowles' The modern practice of adult education.

³ Darkenwald and Merriam credit the British philosophers K. H. Lawson and R. W. K. Paterson with introducing American adult educators to a 'liberal view of adult education.' (p.43) As this paper points out, Everett Dean Martin quite likely deserves this distinction.

⁴ The only references Grattan makes to Martin are as the Director of the People's Institute and as a member of the Advisory Committee on Adult Education,

comissioned by the Carnegie Corporation in 1924.

⁵ Though Knowles does discuss the early years of the adult education movement in the United States, as well as the founding, organization, leadership, and history of the AAAE the only acknowledgement made to Martin is in a table which lists the presidents of the AAAE.

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PERCEPTIONS OF DETERRENTS TO CONTINUING EDUCATION: PERSPECTIVES FROM A FEMALE PROFESSION

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Abstract: The purpose of the research was to study deterrents to continuing professional nursing education, taken for credit as part of a certificate or a baccalaureate, as perceived by nurses who were defined as nonparticipants, from the perspective of a female profession.

Professionals are expected to maintain and modernize their abilities throughout their working life (Houle, 1980). Societal expectations to this effect have resulted in a trend towards the implementation of mandatory continuing education (Rockhill, 1982). In the absence of a legal imperative, however, professionals may choose to abstain from participating in continuing education, especially when there are serious impediments to the pursuit of off-work educational activities as is often the case for women (Buber Agassi, 1982). In Québec, for instance, nurses who continue to practice do not need to submit to a relicensure procedure, nor are they obliged to engage in continuing education activities. Entry level requirements to the practice of nursing are a diploma granted by pre-university institutions. Hospitals and health community centers where the vast majority of nurses are employed are state-controlled. The Government is apparently intent upon maintaining the current entry-level requirements to keep the costs of the public health system from increasing too rapidly, a policy which, according to MacGuire (1980), is also pursued in Britain with regard to nurses. Moreover, working conditions have steadily deteriorated as the hospitals, beginning in the late seventies, were obliged to find ways to increase their productivity in response to diminishing financial resources. Compared to other health professionals, namely physicians, nurses, as members of an almost entirely female profession, have been losing ground in terms of their work situation. The increasing routinisation of the work content appears symptomatic of a deskilling trend, a concept which seems appropriate to describe the context of practice within the collective setting in Québec. At the other extreme, we find the Order of Nurses, the board responsible for the regulation of nursing practice, as the major proponent of the upskilling trend. Since the present basic entry level is considered rather low in comparison to the kind of training required elsewhere in North-America, the Order of Nurses is lobbying for an upgrading of the basic entry level to the baccalaureate by year 2000. Certificate or baccalaureate programs have been offered by universities for a number of years on a part-time basis for in-service nurses wishing to improve their

professional training. These programs attract hundreds of registered nurses every year, despite the fact that there is, at the moment, very little incentive, monetary or otherwise, to enter these programs. Nonparticipation within this context must be considered a phenomenon especially worthy of attention because, as women, nurses must cope with specific constraints including lack of support by the work environment. Based on previous research, it is assumed that the propension of professionals to participate in educational activities should be stronger than for the general population as they show some of the characteristics which have been associated with participation in adult education such as higher educational attainments and incomes (Cross, 1982). Scanlan and Darkenwald (1984:156) have argued convincingly for the necessity of investigating "the construct of deterrent or barrier (which) occupies a central place in theories of participation". In this piece of research and in the subsequent ones (Darkenwald and Valentine, 1985; Hayes and Darkenwald, 1986), participants and nonparticipants were asked to rate discrete deterrents as to their relative importance in their decision not to participate in adult education. Even though participants may have been prevented from participating in adult education at various times, their perceptions of deterrents might be quite different from those of individuals who have never been engaged in such activities. Put differently, the reasons given by nonparticipants for not having participated might shed more light on the phenomenon of nonparticipation than those which influenced participants; it is assumed that asking nonparticipants about deterrents to participation, individuals who somehow did not manage to overcome the barriers, should produce data configurations different, albeit slightly, from subjects who are participants. The present study differs from the previous ones in many respects. In the first place, all subjects are nonparticipants in credit continuing education with the greater proportion of subjects being nonparticipants in other kinds of continuing education activities as well. Second, the emphasis is placed on deterrents to a special type of continuing professional education, courses offered at the university as part of a certificate or a baccalaureate degree. Thirdly, subjects are women working in a female profession in a context where both upskilling and deskilling pressures can be observed.

Method - A 50-item instrument comprising reasons for nonparticipation as well as a background characteristics section was devised to assess nurses' perceptions of deterrents to continuing education. After a thorough examination of the list of discrete deterrents contained therein, the Deterrents to Participation Scale (DPS) developed by Scanlan (1982) was chosen for purposes of data collection because the initial target population, that is allied health professionals, was similar in many respects to the one of the present research. However, a number of revisions had to be made in order to take into account the purpose of the research (deterrents to credit continuing education), the use of the French language and the context of nursing practice in Québec. A panel of eight nursing continuing education specialists were instructed to judge whether each translated item a) was pertinent within the context of nursing continuing education in Québec; b) was couched in an appropriate language for the intended population. They were also requested to suggest

additional reasons which, from their point of view, might prevent some nurses from participating in continuing professional education taken for credit. After completion of this process, the scale comprised fifty items of which thirty-eight were from the DPS and twelve new ones added from the suggestions made by the panel of experts. Finally, the revised instrument was pilot tested (pertinence of the items and language clarity) with sixteen nurses who were selected because, as a group, they shared comparable background characteristics with those of the target population. The overall reliability of the final version was 0.89 (Cronbach's Alpha).

Data source - Consultation of the 1984 Québec Order of Nurses roster (Q.I.I.Q., 1984) showed that 55% (N = 31,311) of nurses had not registered for at least one credit continuing course after their entry level training. From these, the research population was determined to be the 22,494 francophone diploma nurses who said they were practising in 1984. A 9% stratified sample was randomly selected from the 54 cells obtained by subdividing the population using the parameters of age and regional district. A list of 2,063 names was generated through this procedure. Data was collected through the aforementioned instrument sent through the mail to the random stratified sample of the 2,063 francophone nurses whose names appeared on the sample list. A stamped pre-addressed return envelope was also provided. The follow-up procedure comprised a second complete set of documents and two reminder letters at three-week intervals. The unadjusted response rate was 80% (1,651 questionnaires were returned). Analysis of the background characteristics of the nurses who did not respond showed a distribution similar to those of the research population. For the first phase of the research, there were 1,197 usable questionnaires, representing the subjects who said they had not completed at least one credit continuing education course since completion of their basic training (but who might have participated in other kinds of continuing education). For the second phase of the research were selected only those respondents who were labeled "pure nonparticipants", those who had not, during the preceding twelve months taken part in any off-work continuing education activities (conferences, colloquia, workshops, training sessions, etc.). After applying these criteria, were left 909 usable questionnaires for this stage of the data analysis.

Data analysis - Data for this study were the responses given to the 50-item instrument where subjects were invited to rate the items on a four-point scale (Not at all:1, Slightly:2, Moderately:3, Considerably:4) in terms of how influential each reason had been in the decision not to take credit continuing education courses as well as the responses to the background characteristics section. Data analysis comprised two separate stages: 1) First, descriptive statistical procedures were used to rank order the items which had obtained a score of 3 (moderately) or 4 (considerably); the first ten items were then cross-tabulated with the background characteristics to determine whether any associations existed between these two series of data (Chi-square tests were used at the .05 level of significance). 2) Second, taking into account only those subjects who had been labeled as "pure participants" as previously described, exploratory factor analytic procedures were utilized to identify the factor

structure comprising the instrument

Results -

The most important deterrents - Data analysis revealed the following rank ordering of the ten items having been chosen by the greater percentage of respondents as either moderately or considerably influential in their decision not to participate:

Table 1
Rank order of the ten most influential deterrents

No. of the item	Description	Rating	
		Moderately % respond.	Considerably % respond.
3	-Because with all my other commitments, I just don't have the time	21	40
4	-Because it takes too much time to obtain a certificate or baccalaureate	24	37
42	-Because I am satisfied with the way I practise nursing	39	22
44	-Because the demands of my practice leave no time	32	27
7	-Because attending courses would encroach too much on my personal life	25	30
20	-Because it is difficult to get time off from work to attend these courses	22	32
11	-Because working conditions have become so difficult that I just don't feel like attending courses	22	31
38	-Because I'm already a bit burned out	27	24
37	-Because I feel it is not necessary to complete a certificate or a baccalaureate to practise nursing	20	30
48	-Because I find it difficult to take courses on a part-time basis	25	25

The ten major deterrents according to results shown in table I, can be categorised into three themes: 1) lack of time due to the subject's personal situation or to working conditions; 2) lack of interest for this kind of continuing education; 3) constraints due to the work situation. These results are somewhat different from those reported previously with regard to barriers to nursing continuing education (Berg, 1973; Parochka 1981; Puetz, 1980) where family responsibilities, costs and lack of time were shown to be the most important deterrents. However, since

the methods used to collect data were quite dissimilar, differences would be expected. Although there are also substantial distinctions to be made between the present research and that of Scanlan and Darkenwald (1984) with regard to the target population and the type of continuing education (credit versus non credit), it is unexpected to find only three of the items on the list of the most frequently mentioned deterrents in both researches (3), (44), (20). Five of these items (42, 4, 11, 37, 48) are new ones which were added as a result of the validation process

As lack of space precludes a complete analysis of the dependent relations which were found between the major deterrents and background variables, the presentation will be limited to a few salient ones.

Lack of time - Considering that 72% of the respondents were married, that 63% had children under the age of 18 and that 46% were working full time, it is not overly surprising that lack of time appears prominently among the most influential reasons given for not participating in continuing education. For instance, a higher response rate for item 3 (Because with all my other commitments, I just don't have the time) is associated with being married and having children under the age of 18 and with the 25-34 age category. This is also true of item 7 (Because attending courses would encroach too much on my personal life) where, in addition, those working full time show a higher response rate. Working full time and having children under the age of 18 is associated with higher response rates for item 44 (Because the demands of my practice leave no time). From the comments made by many respondents, it appears that having a family and working either full time or part time makes it next to impossible to undertake off-work educational activities. As a whole, working women with family responsibilities appear to be less likely than men to engage in off-work training (Buber Agassi, 1982).

Lack of interest - Items 37 (Because I feel it is not necessary to complete a certificate or a baccalaureate to practise nursing) and 42 (Because I am satisfied with the way I practise nursing) appear to show a lack of interest for credit continuing education. Respondents in supervisory positions are less likely to consider item 37 as important than those attending to patients, as are nurses working in psychiatry or in community health centers. This was predictable as nurses working in these areas may feel greater pressure to improve their professional training.

Work constraints - Working conditions are also perceived by subjects as important barriers to the pursuit of continuing education. For instance, higher rates of response to item 38 (Because I'm already a bit burned out) are associated with working full time, having children under the age of 18 and being older. For item 11 (Because working conditions have become so difficult that I do not feel like taking courses) is more influential as a deterrent in the case of those working full time. Those working full time are evidently more likely to feel the impact of a deteriorated work environment.

Factor analysis - A principal components analysis was chosen as the best exploratory procedure for the data obtained from the 909 subjects who had not participated in any kind of formal off-work continuing education activities during the year preceding the collection of data. Orthogonal rotation using the Varimax procedure was utilized to obtain the simplest

possible structure (maximization of the variance of the squared loadings in each column of the factor matrix). An eight-factor solution was selected as the conceptually most meaningful representation of the data, accounting for 46.4% of the scale variance. These factors were labeled as follows: 1) Lack of perceived need (9 items); 2) Time constraints due to work (6 items); 3) Negative impressions regarding courses (6 items); 4) Lack of confidence (5 items); 5) Low personal priority (5 items); 6) Professional disengagement (3 items); 7) Cost (5 items); 8) Lack of benefit (4 items).

Discussion and conclusion - Considering the unique characteristics of the target population in terms of a number of key variables (nonparticipant nurses as members of a female profession in credit professional continuing education), results of both the descriptive and factor analyses show that perceptions to deterrents to participation in adult education may well be situation-specific. The most unexpected result of the present study is the lack of perceived need for credit continuing education, confirmed both by the descriptive and factor analyses, for those who have entered practice with pre-university training in nursing. As there is most likely a relationship between the level of satisfaction with practice and propension to participate in off-work educational activities, those who feel most satisfied with the way they practice nursing (61% of the respondents) may not see the need to improve their professional training especially when the work environment is considered a source of frustration. Constraints due to work appear as a major deterrent to continuing education both from the descriptive and factor analyses. Clearly, the work situation is perceived as very demanding and stressful by a sizable proportion of respondents. Nonparticipation within this context would be expected as Buber Agassi (1982) has shown that commitment to occupational work increases with the improvements of work conditions, the opposite trend resulting in less commitment. As a final note, item means relating to courses or providers (Factor 3) were among the lowest and were not, therefore, seen as influential in the decision not to participate. It may well be that questions related to course offerings, instruction methods and schedules only act as major deterrents when the decision to participate has been taken and would thus affect participants more than nonparticipants.

A list of this paper's references as well as the English version of the instrument used in this research are available upon request at the following address: Gisèle Painchaud, Andragogy, Université de Montréal, C.P. 6128 - Succ. A, Montréal, Qc, Canada, H3C 3J7.

A THREE PARAMETER MODEL FOR DEFINING A PROFESSION

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ABSTRACT

The problem was to develop a model for defining the Human Services profession as a basis for planning, evaluating and monitoring a college preparatory program for that field. The model developed is based on three defined parameters: job types, institution types, and types of client needs.

DISCUSSION

A profession which is mature and maximally effective in society is capable of being accountable. This means its services and the knowledge to deliver them have been defined with sufficient specificity so as to receive some acceptable modicum of public agreement as to their nature. Along with such recognition comes somewhat stable jobs and monetary rewards for practitioners, including the requiring of certain types of education as a condition for entering the profession.

In addition to recognized professions are those which are in various stages of emergence. Emerging professions possess many of the attributes of those which are recognized, such as organizations, publications and even research; however degrees in these emerging professions are seldom an absolute requirement for many positions, nor do they have the other elements of stability of mature professions. It is fair to say also that unless emerging professions continue to progress toward maturity they will languish in time, their degrees ceasing to be meaningful and their programs beginning to disappear from university curricula.

Clearly the foundation of mature professions lies in a well articulated model which is specific enough so that the clientele whom they serve and the methodology they employ in performing the service has been articulated well enough so that the full range of certification requirements can be met.

The problem dealt with in this research was to see if such a model or a promise of one could be developed for the emerging profession of Human Services. The need for such a model was apparent from serious problems that were arising among schools with professional preparation programs: problems such as disagreements as to transferrability of credits, insufficient recognition by the hiring agencies, and in general, disagreement as to the critical skills necessary for practice in the field.

The history of Human Services is brief by any standard. Initially it grew out of the mental health field after WW II where new and expanding social needs were being impressed on public agencies. This emerging need received attention from NIMH (National Institute for Mental Health) and today approximately 500 schools have programs, mostly in community colleges, although the trend is toward growth in 4-year institutions. The motivation for research on professionalization arose when the authors were attempting to upgrade programs in their own schools.

Our problem was to find a coherent and comprehensive basis for planning curricula. Our method was to review the literature of several accepted and related professional disciplines in order to understand their

models, to review the actual job practices in the field of those workers who either identified themselves or were identified by experts as Human Services workers, and to see if a unique field of study seemed to emerge. The review of literature indicated several solid assumptions as a starting point, namely: 1) that curriculum for any professional preparation must be derived from the skills and knowledges required for jobs in the field, 2) that the definition of a profession was limited by 3 parameters which were (a) the types of services delivered, (b) the institutional settings in which those services were delivered, and (c) finally the specific types of jobs held by the professionals in those institutions, 3) that there were core skills and knowledges which crossed all of these parameters in addition to specialized skills which would be bounded by those parameters, and finally 4) that all definitions had to be specific enough so that empirical data and criteria for evaluating those data could be directly determined.

The remainder of the method was inductive, based on factor analysis carried on at several levels of exactness. This is to say, ranging from sophisticated statistical methods to modified delphi methods which determined agreement between experts as to what factors in their view were distinctive.

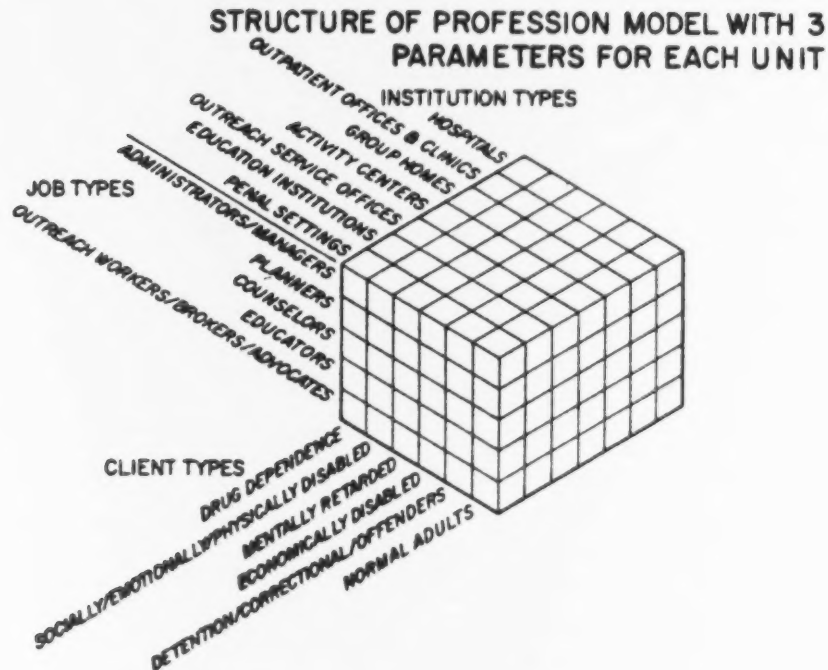
The data for examining work done in the field was at hand from several surveys which had been conducted over several years in an effort to certify Human Services workers, (estimated to number 750,000 nationally). NIMH funded several studies which were conducted by SREB (the Southern Regional Education Board) under the general supervision of Dr. Harold McPheeters and specific direction of Dr. Arthur Benton. This work summarized several other studies (i.e., the Dallas, Elgin, Florida Task Bank, North Carolina Psychiatric Aid and Technomics Task Data projects). In total the jobs of 1400 workers were analyzed representing all skill levels, job types and their associated work activities. These data were factored into 23 "work roles" which were made up from 40 "general competency statements" (see sample in appendix).

The McPheeters report proved to be enormously valuable for furnishing a solid data base, but incomplete as a basis for defining programs. The number of job titles was too large and there was considerable overlap between them. Furthermore it lacked direct connection between the competency statements and jobs as well as a taxonomy of institutional types in which practice was conducted.

This summary analysis by SREB, then, represented the data base with which we began our own research. In our re-examination of these data we refactored the work role statements from 23 down to 5 that seemed more basic (see Figure I). The search for institution types was based on the Midlands Information Referral Agency directory of 1979 listing 550 entries. These were factored down to 7 basic types as indicated also in Figure 1. The client types (by which we meant the classification of problems of clients and the services rendered to help them) were derived from a review of all of the above literature and from our own experience of approximately 20 years.

Figure I is intended to represent the parameters of the profession in its entirety. Any particular unit whether a unit is to define a job specialization, a college program, a course of study or a part of that course, is to be defined by a set of each of the parameters coming

FIGURE I



together. The model is intended to be dynamic, which is to say undergoing constant evaluation and refinement from experience in the field. As jobs change, as new interpretations of needs or institutional forms evolve, the details of definitions of the units should change accordingly. Indeed, our own testing during the past 3-1/2 years has caused us to see where some of the 40 competency statements require revision, although the major design of the model seems to have proven itself in terms of deriving curricula, research needs and the other necessary elements of a mature profession. Provisions for receiving ongoing feedback data are designed into our programs.

Students entering our programs are required to select one of the job tracks as a major. At Western, we offer 3 of the 5 possible job tracks-- administrator, counselor (for drug abuse) and outreach workers. Students may also choose a non-specialized track in which case they are required to take all of the core subjects in the three jobs with no space left for electives. Electives for students in one of the three tracks are based on their own needs for detail within the chosen track. For instance, as a drug abuse counselor they may already have had sufficient physiology. Electives may be taken from any department on campus. In sum, the defined parameters indicate the knowledges and skills required by the selected job performance standards of practicing professionals. Such definition of curricula also insures continuity between different instructors and most of all, ability to accurately evaluate the relevance of transfer credits.

Selection and evaluation of intern positions is likewise guided and evaluated. Each intern position receives a job title and definition from

some part of the paradigm, the detail of which is taken from one of the 40 competency statements. In the event that the job cannot be so defined, the paradigm is examined for possible change, or the job is judged inappropriate. In either event, the student has an appropriately defined set of skills which must be adequately learned and judged according to the agency supervisor. Thus, detailed supervision and evaluation of the intern positions is possible, and of course it should be obvious that this is a principal avenue of feedback for validating the model. We have also written a computer program for storing and retrieving information as to the students' skill attainment record so that evaluation, a normally burdensome process, can be done quickly with adequate detail and comprehensiveness. The program is written for both a mainframe system (RPG II) and for IBM PC compatible software.

Our experience during the past 3 years has indicated that this model does indeed describe jobs in the field. We have received positive confirmation from agency supervisors as to the job types, the institution types, and the necessary skills to learn in the performance of those jobs. As a matter of fact, some supervisors have indicated that the job evaluation model is superior to their own evaluation systems and are thinking of adopting our system. It would appear, therefore, that this model is useful for defining the field, that the data confirms reasonably accurately that this is an emerging profession, and that the groundwork has been laid for advancing the Human Services profession toward accountability and public recognition. Furthermore, we are satisfied that the model fulfills the requirements for specificity in deriving curricula, program, research problems and other criteria which characterize mature professions.

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APPENDIX

SOUTHERN REGIONAL EDUCATION BOARD
PARAPROFESSIONAL WORKER CERTIFICATION

COMPETENCY STATEMENT #023

Staff Development/Training

Statement: Worker identifies need, plans, conducts and evaluates staff training in order to develop proficient human resources within the organization.

Interpretation: This is a frequently performed competency essential to effective organizational functioning and a harmonious and efficient staff. The training may be formal, informal or a combination of both. The staff training envisioned here is the inherent responsibility of all supervisors although a full-time training staff may be available in some institutions for consultation and learning resources.

Context: This competency applies to all workers responsible for the performance of assigned staff (staff members, trainees, volunteers and students placed for experiential learning). It applies in all settings and is continuous, that is, advanced learning objectives are identified as former goals are attained. Level: Associate-Professional. See level characteristics scale for usual application.

Indicators:

- 1) Worker orients staff to the organizational unit or program and identifies responsibilities and expectations.
- 2) Worker identifies training needs of individual staff persons.
- 3) Worker develops individual training plan with each staff person and schedules training.
- 4) Worker encourages and assists staff person to obtain additional learning resources.
- 5) Worker conducts individual and group instruction for staff in subject/skill areas of own expertise.
- 6) Worker observes, examines and critiques learning assignments. Provides feedback and offers constructive suggestions for mastery.
- 7) Worker periodically evaluates developmental progress of each staff person.
- 8) Worker seeks out learning opportunities elsewhere for staff.
- 9) Worker integrates training into service delivery routine.
- 10) Worker counsels staff members to assist in the identification of long-term career goals and developmental opportunities and encourages progress towards these goals.

ADULT LEARNING IN VOLUNTEER SETTINGS: A NEGLECTED CONNECTION

John C. Fiset
Donna J. Freeman
Paul J. Ilsley
Brent R. Snow

Introduction

Popular literature depicts volunteering as selfless commitment to the greater good (Bellah, 1985). Historical analyses often caste volunteer expression in the light of the pioneer "barn-raising" ethic (Scattschneider, 1984). And recent research elaborates volunteering as an economic quid pro quo arrangement, whereby volunteers receive "psychic benefits" in return for their labor (Smith, 1980). In this day and age of professionalism, volunteer enterprises find themselves in the curious position of certifying volunteers through coalitions and even state licensing boards, thereby compressing the meaning of the voluntary spirit into measurable units of action. Clearly, voluntarism means different things to different people, depending on their context and vantage point. The significance of this research is that it illuminates the link between voluntary participation and learning, demonstrating the complexities of voluntary action. Findings suggest that major differences exist among contexts that inspire different "types" of learning, commitment, and participation. This research serves as a basis for understanding the limits of control on volunteer participation, and offers the premise that since volunteering has such varied meanings, it is impossible to capture all of its complexities in a single definition.

This study emerges from a much larger project that has been in progress for over two years. During that time, a team consisting of a professor, a computer research specialist, and ten graduate students have interviewed over 80 volunteers and 40 paid staff persons working with volunteers from 11 different organizations (religious settings, hospitals, peace encampments, for-profit corporations, museums, adult literacy organizations, senior citizen centers, feminist organizations, volunteer health organizations, governmentally sponsored voluntary agencies, and cultural arts organizations). The interviews have yielded 120 transcripts and more than 2,500 pages. Moreover, the transcripts have been coded and analyzed for themes, patterns and anomalies. An analytic induction approach has been used to capture essences of voluntarism, and the useful mainframe computer program, QUALOG, has facilitated the process of an easy to follow audit trail of memos and evolution of thinking.

Research Objectives

The primary objective of this research is to better understand the importance and type of learning of volunteers in a wide variety of settings. As Bandura informs us, "collective efficacy is rooted in self-efficacy." (1986, p. 449) If so, the context of volunteering influences a volunteer's commitment, learning, and duration to a cause, and likewise, a volunteer's growth in service contributes to the efficacy of an organization. Awareness of what volunteering means to individuals may assist organizational leaders reduce unnecessary mythology regarding volunteers and voluntary action. The following groupings suggest two major questions with underlying objectives:

- I. What evidence can be found in the data regarding the importance of learning to volunteers?
 1. To determine whether the type of learning volunteers achieve influences, or is influenced by, the type of participation.

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2. To explicate the individual evolution of volunteer learning patterns.
 3. To explore the various formal organizational types and approaches to training and to determine volunteers' perception of those opportunities for learning.
 4. To educe the types of informal learning experiences for volunteers, in a variety of organizational settings, and their importance to volunteers.
- II. What does volunteering mean to a person's sense of mission or citizenship?
5. To understand the history of individual's patterns of volunteering.
 6. To gain a sense of how volunteers make choices to participate in one organization from among many other options.
 7. To determine a volunteer's devotion to a cause, and how that cause drives choices of participation and learning, or how choices of participation and learning drives selection of a cause.

Significance

The research supports a connection between the two fields, voluntary action and adult education. As we learn how volunteering influences a person's pattern of learning and participation, the connection becomes ever more apparent. Given that a volunteer has many choices regarding volunteer context, each of which offers differing levels of involvement and a host of expectations, it is clear that the study of voluntary action may lead to discoveries that are closely related to foundational principles of adult education. As adult educators continue to study forms of collective action and support the ideal of a participatory citizenry, they should prosper from an examination of voluntarism as a crucial and widespread forum of collective action.

There are both scholarly and practical implications. Owing to its recent emergence, the study of voluntary action, and especially the field of volunteer management, has yet to gain great sophistication. For the most part, managerial texts have been based more on conventional wisdom than on research. Not only is there no cohesive body of literature, but advice presented to managers of volunteers is at best reasoned assumption, not well-grounded postulates of management. Two points summarize the nature of the field. First, many aspects are taken-for-granted, such as why people volunteer, how paid staff regard volunteers, the nature of commitment, and how to best manage a voluntary organization. Second, definitions of such key terms as voluntarism and learning are hazy in the literature. Managing volunteers is a very complicated business, especially when motives of volunteers evolve and change, a contention our research cannot refute. There simply has not been proper research to support even the most popular managerial contentions, many of which have remained unchallenged for decades. Many taken-for-granted principles fall along the lines of correct managerial procedure and include: what motivates volunteers; how to supervise and evaluate them; what the role of volunteer coordinator ought to entail; and what place should learning (both formal and informal) have in the scheme of volunteer programming. There is a need to examine these assumptions through research, to clarify options for managers of volunteers and thereby improve practice of voluntary action.

Methods

The methodology of this study is analytic induction (Znaniecki, 1934; Robinson, 1951). Researchers are applying the analytic techniques suggested by Becker and Geer. The analysis is a two-tiered process; each tier is outlined briefly below.

Level I: One researcher/one setting analysis.

Stage 1: The data collection began with a focus on an initial definition/explanation of the phenomenon of volunteering. The team chose a focus of voluntary participation and citizenship. Individual team members created working definitions by identifying an organizational context and by selecting the promising

organizational problems and concepts of that setting related to voluntary action. Thus, the components of voluntary participation and citizenship have been initially identified as type of learning, type of participation, objectives of volunteers, content of learning, and method of learning.

Stage 2: Each researcher examines his/her working definition in light of additional data. Each component is characterized by indices of its existence within the setting and by working hypotheses that describe the relationships among indices.

Stage 3: Each researcher modifies the working definition to produce an explanation of the relationships between specific components within the chosen setting. The definition is considered fully modified after the indices are examined for their frequency and distribution across the data and when it accounts for negative-case evidence within the data.

Level II: Team/Across settings analysis.

Stage 4: The team actively seeks cases within other settings that might not fit their definitions. The purpose is two-fold: 1) to modify the working definition through additional negative-case evidence or through delimiting the universe to which it applies, and 2) to generate alternative explanations for the relationships between all components comprising the working model of voluntary participation/citizenship.

Stage 5: The team continues to reformulate the working model until a universal explanation is reached. The model will be considered fully modified after the within-setting definitions are examined for their frequency and distribution across the settings, and when it explains and narrows the universe to which it applies.

The organizational settings, whether they be corporate, service, social activist, or private/not-for-profit, have been analyzed for fit in one of the following categories: Institutionally-Directed Organizations (such as a national literacy volunteer organization, or corporate volunteer agency), Volunteer-Group Directed Organizations (such as a semi-autonomous guild in a hospital, museum, or public television station), Problem-Directed Organizations (such as a volunteer fire department, certain aspects of the Red Cross, or many boards of directors) or Social Change Directed Organizations (such as a women's peace encampment and other aspects of the peace movement). Though these contexts are not pure types, that is, since some organizations may fall into more than one category, there are discernable propensities revealed in organizational mission statements, confirmed by statements of paid staff and volunteers. Individual team members analyzed data from these four contexts currently. The table below summarizes the current structure of individual analysis:

Voluntary Participation/Citizenship				
	Study 1	Study 2	Study 3	Study 4
Context:	Institutionally Directed	Volunteer-Group Directed	Problem-Directed	Social Change Directed
Component:	Organizational Culture Commitment	Organizational Culture Learning	Learning Organizational Culture	Commitment to a Cause Consciousness Raising

Componential	Training Motives	Communication Networks	Training Motives	Sacrifice Consciousness
Constructs:	Perception of Task	Working Relations Socialization	Skills	Raising Vision of the Future

The research team utilized QUALOG (Shelly and Sibert, 1985), a logic-programming application, to facilitate data analysis. Each researcher built a knowledge base representing his/her interpretations of the data. As modification of the working definition proceeded, each researcher tested specific portions of the definition using formalized queries of the knowledge base. By the close of Stage 3, researchers fully-developed descriptions of their settings supported by full documentation of their procedures. The documentation includes:

1. The data base, consisting of full-text interview transcripts;
2. the knowledge base consisting of logic assertions representing the researcher's interpretations of the data;
3. the formalized queries representing the combinations of knowledge-base information that identify supporting evidence from the data for specific portions of the working definitions;
4. and memoranda that explicate the researchers' rationales for their interpretations and procedures.

Conclusion

Clearly, findings may not be generalizable to all settings or regions of the U.S., let alone to other parts of North America. The data suggest, however, that 1) volunteering is perceived as an important form of self-development, 2) volunteering in general is a powerful learning context for individuals, 3) learning, as a motive for volunteers, is not static, but rather evolves, and 4) different volunteer contexts provide different types of learning for volunteers. These principals are presented in Figure 1.

Accordingly, volunteer contexts can be differentiated according to aspects of learning, type of participation, type of learning, volunteer objectives, content, and method. In each of the four settings it was found that learning is a crucial factor for satisfaction, hence duration of service, but that much of that learning is beyond the managerial control of organizational personnel. For example, in a member association, volunteers are often persuaded to assume responsibilities for which they have no training or expertise, much like a graduate study in adult education internship. In such cases, volunteers are expected to "learn by doing." In a literacy volunteer organization, to provide a contrasting situation, volunteers are trained in skill acquisition that coincides with the procedures of the volunteer experience. Another important distinction between these two examples is the average length of service. In the first example average service of volunteers is three years, and in the second, less than one.

The four contexts can be further contrasted according to what learning means to volunteers. It is not suggested that all types of voluntary action should develop similar learning strategies for volunteers. To the contrary, we can now see that volunteer organizations can be differentiated according to factors that go beyond organizational mission, namely the importance of the learning and the ways it is conceptualized. The wide variety of types of learning achieved by volunteers suggests that the meaning of the experience varies to such an extent that it is not possible to define them under one rubric. Compounding any easy analysis of the situation is the fact that volunteers' reasons for learning evolve. The tentative conclusion can be reached that when organizational constraints make informal or problem-solving learning, not to mention consciousness-raising learning, difficult for volunteers, they are likely to leave.

FIGURE 1
A TYPOLOGY OF VOLUNTEER LEARNING

VOLUNTEER CONTEXT	COMMITMENT/ DURATION	TYPE OF LEARNING	VOLUNTEERS' OBJECTIVES	CONTENT OF LEARNING	METHOD OF LEARNING
TYPE I INSTITUTION- DIRECTED ORGANIZATIONS	To organization/ Three years	Instrumental/ Didactic (Uniformity)	Meeting Organiza- tional Goals	Task-Specific Skills and Knowledge for Role	Skill Instruction Rehearsal
TYPE II VOLUNTEER GROUP-DIRECTED ORGANIZATIONS	To volunteer group/ Seven years	Social/ Expressive	Social Goals/ Organizational Values	Role of Volunteers Tolerance of Differences	Group Socialization
TYPE III PROBLEM- DIRECTED ORGANIZATIONS	To mission of the organization/ Seven years	Problem-Solving	To Accomplish Mission	Teamwork Group Process	Experiential Learn- ing and Goal Accomplishment
TYPE IV SOCIAL CHANGE DIRECTED ORGANIZATIONS	To Social Ideals and Vision of the Future Lifetime (Not organization- specific)	Critical/ Reflexive	Social Change Empowerment	Political Processes Sacrifice	Praxis

The various types of learning found among volunteers correspond with the four types of volunteer context. That is, Instrumental/Didactic learning occurs within Institution-Directed Organizations, Social/Expressive learning in Volunteer Group-Directed Organizations, Problem-Solving learning in Problem-Directed Organizations, and Critical Reflexive with Social Change-Directed Organizations. Clearly, a number of circumstances explain these tendencies. In Type I organizations, pre-service training is often mandatory. In Type II organizations, where commitment to the organization is often perceived by volunteers to be based on the sense of belonging to a group, neither skill learning, nor critical reflexivity seem to fit the occasion. As for volunteers involved in social movements, their commitment transcends organizational allegiance and instead lies with dedication to a mission, such as equal rights, or a nuclear-free world. Therefore, their learning is centered upon social change, and ways in which to bring it about. Interestingly, this type of volunteer involvement does not preclude skill related, social expression, or problem-solving types of learning. In this way, there is a hierarchical effect of learning at work among types of voluntary agencies. Further research regarding the role of learning in volunteer settings will add to our growing awareness in ways that expand typologies such as this one. For the moment, we at least have a way of bringing a level of complexity to the conversation on what volunteering means to individuals that surpasses conventional thinking.

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Anomia and Life Satisfaction as a Basis for Understanding
Participation in Education-Related Activities by Older Adults

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Abstract

An examination of the relationship between the attitudes of two populations of older adults and their participation in education-related activities reveals statistically significant associations between the independent variables, Anomia and Life Satisfaction, and the dependent variables, Participation in Educational Activities and Self-Directed Learning Participation.

Problem

This study examines and assesses the relationship between attitudes of older adults regarding their level of satisfaction with the self and its environment and their level of participation in education-related activities. The sociological variables, age, educational attainment, and income, have been identified in the research literature as important predictors of participation in educational activities by older adults. However, limited attention has been focused on the relationship between the attitude of the older adult to him/herself, the past, and the social environment and participation in educational activities.

In order to probe the subjects' attitudes toward themselves and their reaction to the potential within a range of experiences, levels of anomia and life satisfaction were assessed. Anomia gauges a person's perception of "self-to-others" distance expressed as the alienation or powerlessness of the individual or the normlessness or unreliability of the environment. The Srole (1956) Scale defines anomia in terms of alienation from civic leaders, the unreliability of the social order and human relationships, the disappearance of internalized norms and values, and a loss of personal and social attainment.

Life satisfaction describes a person's perception of self in older adulthood by providing insight into the person's affirmation of earlier life experiences and satisfaction or success in the older adult role. In addition to a general index, the Life Satisfaction Index A (Neugarten, Havighurst, and Tobin, 1961) is divided into four subscales: Mood Tone, a measure of happiness, pleasure, and affect toward people; Zest, a measure of enthusiasm and ego-involvement; Congruence, a measure of the extent to which goals have been achieved in life; and Resolution, a measure of the extent to which a person affirms life

and accepts responsibility for it.

The word anomie was first used to describe the absence of custom or commonly expected usage in the social environment. Emile Durkheim found that in times of social change or unrest, "when traditional rules have lost their authority" (1951, p. 253), the rate of suicides increased. Although Durkheim used anomie to describe a societal phenomenon, it was clearly not without an individual dimension: the individual assessed the social condition and responded to the anxiety which it produced. Finifter has since observed that the "social condition [of anomie] becomes manifest at the "individual level [anomia] as uncertainty as to proper action and belief" (1972, p. 4). Examples of occasions likely to result in the uncertainty cited by Finifter are economic depression, sudden prosperity, death of a spouse, or divorce. The role transition between adulthood and older adulthood often involves retirement, relocation, loss of spouse, adaptation to a lower socio-economic status, and, coupled with the physiological and psychological changes which accompany aging, provides a broad setting in which to foster anomia. The traditional roles may no longer exist, and the new roles are defined by confusion and uncertainty for many older adults.

According to the literature, a high level of anomia may inhibit either learning or participation of adults in education-related activities. Seeman and Evans (1962) confirmed a significant relationship between alienation and powerlessness and the retention of knowledge, indicating that learning is dependent upon an individual's established expectancy for control, i.e., upon the lack of powerlessness or alienation. Rose demonstrated that participation in adult basic education will produce a reduction in anomia scores (1971). Garry (1975) found a higher level of anomia among nonparticipants than among participants in adult education activities, and Fisher (1986) arrived at a similar conclusion with older adult subjects. Meier and Bell (1959) inferred that a higher level of anomia among older adults may indicate awareness of the impossibility of succeeding in attaining their life goals.

Life Satisfaction indices grew out of the efforts of Neugarten et al. (1961) to develop an instrument to measure successful aging using the individual's own perception as the point of reference and concentrating on a number of different elements in a person's psychological well-being. Brockett identified a positive correlation between life satisfaction and self-directed learning readiness among older adults (1985). Wolfe (1963) found that happiness and good adjustment in the later years were significantly related to continued purposeful learning. Mizer concluded that older persons who are educationally active tend to have a greater zest for living, better self concept, and are more generally satisfied with their lives (1975).

Methodology

In order to assess the relationship between Anomia and Life Satisfaction and three education-related variables, two populations were surveyed. In Population 1, a survey instrument was used with 786 active older adults at 8 different gathering places for seniors. In order to control for age, sex, marital status, and socio-economic status, 211 participants in educational activities were matched with 211 nonparticipants on the basis of these demographic variables (Fisher, 1986). In Population 2, a structured interview

format was used with 69 older adults at 3 different locations: senior centers, private homes and apartments, and a nursing home. In this group, subjects' lifestyles ranged from active and independent to dependent and requiring extended care. All subjects in both groups were at least 55 years of age.

Independent variables were Anomia, measured using the Srole Anomia Scale (1956), and Life Satisfaction, together with the Mood Tone, Zest, Congruence, and Resolution subscales, measured using the Life Satisfaction Index A (Neugarten et al., 1961). Dependent variables were Participation in Educational Activities, Awareness of Learning Needs, and Self-Directed Learning Participation. Participation in Educational Activities was measured according to subjects' response to the question, "List any classes, study groups, workshops, conferences, or other educational activities in which you have participated during the past year." Awareness of Learning Needs was probed with the question, "Is there anything in particular that you would like to know more about or would like to do better?" Self-Directed Learning Participation (Fisher, 1979) was measured using a six-item scale which probed the participation of subjects in certain self-directed learning activities. Data were analyzed using the Pearson product-moment correlation to summarize the relationship between each independent and each dependent variable.

Description of Data

Table 1 presents the correlation coefficients which describe the relationships between the independent and dependent variables and identifies those associations found to be statistically significant at the .05 and .01 levels of probability. Despite differences between the two populations, the first being somewhat younger and considerably more homogeneous than the second, the essential similarity in the overall pattern of relationships is apparent. In Population 1, Anomia is related at a statistically significant level to Participation in Educational Activities; Life Satisfaction, Mood Tone, and Resolution are related to Self-Directed Learning Participation. Zest is related to Participation in Educational Activities and Self-Directed Learning Participation.

In Population 2, Anomia and Zest are related to Participation in Educational Activities and Self-Directed Learning Participation; Life Satisfaction and Mood Tone are related to Self-Directed Learning Participation. In each population, six relationships between the independent variables and dependent variables were identified, of which five involved the same variables across both populations. In neither population was there a statistically significant correlation between the independent variables and Awareness of Learning Needs, or between Congruence and the dependent variables.

A summary of these findings indicates that in both populations there is a statistically significant relationship between Anomia and Zest and Participation in Educational Activities and between Life Satisfaction, Mood Tone, and Zest and Self-Directed Learning Participation.

An examination of the subject matter comprising the Life Satisfaction and Anomia scales reveals potential overlap and suggests the possibility that to some degree both may measure the same attitudes from opposite perspectives.

The Life Satisfaction score consists of the sum of the scores of its subscales; it was also correlated at a statistically significant level with Anomia in both Population 1 and Population 2. The similarity between the Anomia and Life Satisfaction measures is confirmed by the correlation of the Dependent Variables, Participation in Educational Activities and Self-Directed Learning Participation, with both Independent Variables, Anomia and Life Satisfaction and its subscales.

Table 1

Correlation Coefficients

between Anomia, Life Satisfaction, and Education-Related Variables

Independent Variables	Population	Dependent Variables		
		Participation in Educational Activities	Awareness of Learning Needs	Self-Directed Learning Participation
Anomia	1	$r = -.1868^{**}$	$r = -.1258$	$r = -.0305$
	2	$r = -.3536^{**}$	$r = -.0934$	$r = -.2320^{*}$
Life Satisfaction	1	$r = .0526$	$r = -.0312$	$r = .2033^{**}$
	2	$r = .1776$	$r = -.0443$	$r = .3779^{**}$
Mood Tone	1	$r = .0371$	$r = .1313$	$r = .1135^{**}$
	2	$r = .1728$	$r = -.1497$	$r = .2868^{**}$
Zest	1	$r = .0801^{*}$	$r = .0607$	$r = .2389^{**}$
	2	$r = .2670^{*}$	$r = .0659$	$r = .4907^{**}$
Congruence	1	$r = -.0255$	$r = -.0395$	$r = .0722$
	2	$r = -.0343$	$r = .0884$	$r = .1053$
Resolution	1	$r = .0727$	$r = -.0747$	$r = .1427^{**}$
	2	$r = .0974$	$r = .0477$	$r = .1848$

* $p < .05$. ** $p < .01$.

Discussion

One possible explanation of the relationship between Anomia and Life Satisfaction is that life satisfaction among older adults is inversely related to alienation, powerlessness, and uncertainty. Anomia and Zest, the independent variables most frequently related to the dependent variables, may in fact be measures of similar attitudes toward ego-involvement and purposefulness. Their association with the education-related variables may denote that participation in education-related activities serves as a vehicle for the expression of enthusiasm and confidence, and conversely, that lack of participation is associated with alienation, powerlessness, or isolation.

The frequency with which Self-Directed Learning Participation is correlated with the independent variables indicates that participation in self-directed learning activities is related to a broad range of attitudes measured by the Anomia and Life Satisfaction scales. Self-directed learning may clearly reflect a person's affirmation of self and the social environment through confidence in his/her own initiative and capability and in the worth of his/her effort.

These findings reinforce the need for a strong social dimension in education-related activities planned by practitioners in order to mitigate the effects of personal isolation or anomia. The findings of earlier research that anomia increases with age (Bell, 1957) heightens the necessity for practitioners to develop programs which address both the educational and psychological needs of the older adult.

Further, these findings call for an understanding that non-participation in education-related activities may be an expression of dissatisfaction, alienation, or powerlessness. Participation assumes control over one's life, the power to initiate involvement, and the confidence that the participant will benefit from it, and may be a measure of an older adult's confidence in the self and its environment. On the other hand, an older adult with a high level of anomia may be powerless to control and initiate in order to participate. Alienation may have sufficiently distanced the person from his/her surroundings, and an environment perceived as undependable may inhibit new ventures. It is therefore inadequate to assume that if programs responding to educational needs are presented, older adults will attend. Developers of programs for older adults need to discover particular ways to address the older adult powerless and alienated in order to serve them with education-related activities.

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An Analysis of Research Contributions
to the Adult Basic Education Literature 1976-1986

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Abstract

Forty-three articles reporting empirical research in adult literacy education published in three major adult education journals from 1976 to 1986 were analyzed according to research design, size and type of subject population, and ~~content variables~~ used in each.

Purpose

The largest literacy effort in the United States is the government's program which originated with the passage of the Adult Education Act of 1966 and which has continued with annual funding. This program is directly or indirectly responsible for the development of several types of literacy programs, such as Adult Basic Education (ABE), Adult Secondary Education (ASE), and Adult Performance Level (APL). These and similar programs were established to serve the learning and educational needs of approximately 72 million illiterate and functionally illiterate adults. During the twenty years since 1966, the ability of these nationwide programs to attract, enroll, and retain adults has stabilized at between four and five percent of the target population, less than one-half of one per cent of whom complete the programs annually.

Educators, both practitioners and researchers, disagree as to the most effective approaches and procedures to address the broad range of personal, learning, and educational needs of this population. Various explanations have been offered for the inability of the programs to serve greater numbers of low-literate learners more effectively. As in other areas of educational practice, it is expected that the research literature will consider the significant problems in the practice of adult basic education and thereby suggest promising solutions upon which that practice may be constructed.

The purpose of this research was to determine the nature of the contribution to the knowledge of successful practice in adult literacy education made by the empirical research published in three adult education journals, Adult Education Quarterly, Adult Literacy and Basic Education, and Lifelong Learning: An Omnibus of Practice and Research, during the decade between October 1976 and October 1986. In order to achieve this purpose, several research questions were addressed specifically: (a) What empirical research documents focusing on adult literacy were published during the period of the study? (b) To what extent have the research efforts focusing on adult literacy employed research designs which sought either to test theory or to generate theory? (c) What aspects of the adult literacy effort have received the greatest amount of attention from researchers, and what aspects have

received the least amount of attention?

Theoretical Framework

Three approaches to the use of research as a basis for theory and practice are often cited. Campbell and Stanley (1963) argue that the research experiment is (a) the only means for settling disputes regarding educational practice; (b) the only way of verifying educational improvements; and (c) the only way of establishing a cumulative tradition in which improvements can be introduced without the danger of a faddish discard of wisdom in favor of inferior novelties. According to this experimental approach which seeks to provide an objective basis for decision making, the methodology is essentially that of hypothesis or theory testing in which the researcher manipulates variables in order to assure the integrity of the findings. Pre-experimental, experimental, quasi-experimental, correlational, and ex post facto designs are used to control to varying degrees the various sources of internal and external invalidity.

Guba and Lincoln (1981), on the other hand, advocate a naturalistic approach in which the researcher is immersed in, experiences, and interacts with the subjects being investigated. In this instance, the researcher begins, not with the theories to be tested, but with phenomena to be observed in the process of describing and understanding a particular event or situation, resulting in the emergence of theory. The research design emerges as the research is being conducted in the natural setting. Rather than manipulating the phenomena, the researcher seeks to discover their significance to the situation through the use of inquiry. Procedures may include such qualitative methods as interviews, observation, document analysis, and unobtrusive measures.

A third approach, survey research, studies populations by selecting and studying samples to discover "the relative incidence, distribution, and interrelations of sociological and psychological variables" in order to make an accurate assessment of whole populations of people (Kerlinger, 1973, 410). The variables examined in survey research include demographic facts as well as attitudes and opinions, often with an aim to identify relationships between the variables under scrutiny. Methods often include questionnaires and paper and pencil instruments designed to measure particular phenomena.

Using elements from these three approaches to research, studies were classified according to experimental, pre-experimental, ex post facto, naturalistic, and survey research designs. Data were also gathered describing the size and type of the subject populations and methods of information gathering and processing.

The content of the research was analyzed using Pratt's (1981) modification of the Dunkin and Biddle (1974) paradigm of educational program components. This paradigm presents four comprehensive categories by which to understand each study: Antecedent Variables, Context Variables, Process Variables, and Product Variables. In order to use this framework to analyze the content of the research articles, the following explicit categories were developed: (a) Antecedent Variables: Personal characteristics of students; Personal characteristics of teachers; Training, education of teachers; Outside support for students. (b) Context Variables: Program content and focus; Institutional parameters; Program setting. (c) Process Variables:

Teacher skill and behavior; Academic learning time; Academic integration of students; Social integration of students; Student behavior. (d) Product Variables: Student attendance, retention, completion; Increase in employment or economic status; Gains in learning outcomes; Increase in student self-image and social skills.

In addition to the assessment of each research article by research design and research content, the subject population was identified as to type and size.

Review of the Literature

The literature was reviewed to identify adult literacy research published in the three aforementioned adult education journals between October, 1976, and October, 1986. Both a computer search and a manual search were conducted. The computer search utilized the index compiled by the Educational Resources Information Center (ERIC) to identify journal articles discussing ABE students, adult literacy, ABE programs, basic skills, high school equivalency, and demonstration projects. The search yielded over one hundred relevant documents. The number of documents was culled to 43 by selecting for further analysis only those which met the following criteria: (a) Published in one of the three journals specified; (b) Published during the time frame specified; (c) Utilized an empirical research design; (d) Focused on one or more of the content categories described above.

Presentation of Data

Of all of the studies reviewed, 21% used a naturalistic design and 7% used an experimental design. The largest number, nearly one third (30%) of the articles, used some variation of an ex post facto design. Ten studies, nearly one fourth, used a survey design. These data are contained in Table 1. Over 72% of the studies reviewed were either descriptive survey analyses of a single population, a variation of a pre-experimental design, or an ex post facto design. No quasi-experimental designs were identified.

Table 1

Types of Research Design by Frequency of Studies

Type of Design	N	Percent
Naturalistic	9	20.93
Experimental	3	6.98
Pre-Experimental	8	18.60
Ex Post Facto	13	30.23
Survey	10	23.26
Total	43	100.00

Table 2

Number of Subjects by Frequency of Studies

No. of Subjects	N	Percent
0 - 24	11	25.6
25 - 49	10	23.3
50 - 99	8	18.6
100 and above	14	32.6
Total	43	100.0

According to Table 2, nearly half (49%) of the studies had sample sizes of fewer than 50 subjects; approximately 19 percent analyzed samples of 50 to 99 subjects, and nearly 33 percent had sample sizes of over 100 subjects.

In Table 3, the largest group of subjects were students in various programs (58.14%), followed by teachers, tutors, volunteers and administrators (25.58%). Others who served as subjects for the research included members of the target population not in school (16.28%). Six of the studies (14%) incorporated more than one population group in the research.

The analysis of the content revealed that 79% of the studies investigated one or more Product Variables, and 74% investigated one or more Antecedent Variables. See Table 4. Over 44% considered a Context Variable and nearly 28% studied a Process Variable. The variables most frequently included in the research designs were Personal characteristics of students (51%); Student attendance, retention, completion (28%); Program content, focus (23%); and Gains in learning outcomes (23%). Variables least frequently included were Academic integration of students, Academic learning time, and Student behavior.

Table 3

Types of Subjects by Frequency of Studies

Type of Subjects	N	Percent
Students	25	58.14
Teachers and Administrators	11	25.58
Non-school	7	16.28
Total	43	100.00

Table 4

Categories of Variables Studied by Frequency of Studies

Variable	N	Percent of Studies
Antecedent Variables:		
Personal Characteristics of Students	22	51.2
Personal Characteristics of Teachers	4	9.3
Training, Education of Teachers	3	7.0
Outside Support for Students	3 (32)	7.0 (74.42)
Context Variables:		
Program content, focus	10	23.3
Institutional parameters	3	7.0
Program setting	6 (19)	14.0 (44.3)
Process Variables:		
Teacher skill or behavior	8	18.6
Academic learning time	1	2.3
Academic integration of students	0	0.0
Social integration of students	2	4.7
Student behavior	1 (12)	2.3 (27.9)
Product Variables:		
Student attendance, retention, completion	12	27.9
Increase in employment or economic status	7	16.3
Gains in learning outcomes	10	23.3
Student self-image and social skills	5 (34)	11.6 (79.07)
Total number of categories studied	97	
Total number of studies	43	

Discussion of Data

It was considered beyond the scope of this review to judge the appropriateness of the choice of particular designs by researchers or to assess the degree to which the underlying assumptions of these designs were upheld. In keeping with its purpose, this study limited itself to identifying and reporting designs, populations, methodologies, content, and other related variables used by the researchers.

Campbell and Stanley suggest that studies which employ a single observation to describe the effect of a treatment on a single population "have such total absence of control as to be of almost no scientific value" (1963, p. 6), and that pre-experimental studies are only "worth doing where nothing better can be done" (p. 7). The minimum of useful scientific information requires at least one formal comparison. These designs, according to Campbell and Stanley, are weak scientifically because the presumed effect might have occurred as it did without the treatment and presumed cause. In this study,

nearly 42% of the adult literacy education research conducted during the past decade possess such weakness and have very limited utility so far as either theory generation or theory testing is concerned. In addition, the survey research designs do not meet the rigorous requirements of parametric analysis, whereas with experimental, pre-experimental, and ex post facto designs, the majority of designs were developed to meet those requirements.

Although there are no simple formulas for determining the adequacy of a sample size, the size of the sample affects the ability of the researcher to relax the normality assumptions of the sample and make use of the central-limit theorem. According to Blalock (1972, p. 185), whenever $N > 100$, the normality assumption can almost always be relaxed. If $N > 50$ and there is empirical evidence that the departure from normality is not serious, then parametric tests may be employed. If $N < 30$, one should be on guard against using such tests. Nonparametric tests involve weaker assumptions and may not take advantage of all the available information. A test which requires stronger assumptions is a more powerful test in the sense that its use will involve a lower risk of a type II error. The power of a test is inversely related to the risk of failing to reject a false hypothesis. The greater the ability of a test to eliminate false hypotheses, the greater is its relative power. In this study, approximately one fourth of the studies involved samples where $N < 25$, indicating a greater risk in accepting false hypotheses.

One may infer from the analysis of the types of content presented in Table 4 that researchers have focused on student characteristics and student retention to the exclusion of many aspects of the educational program related to its teaching-learning process and context, especially the role of the teacher and the role of the institution. In this respect, adult literacy education research resembles adult education research generally with its preoccupation with participation variables.

It may be argued with considerable justification that the choice of research designs and types of subjects selected for these studies reflects those same difficulties in researching this population which researchers seek to address: attrition, lack of motivation, etc. But without greater attention to design, sample size, and content variables, the research findings fall short of providing the knowledge to improve the practice of adult literacy education.

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Research and Publishing in Adult Education: A Study of
the Approaches and Strategies of the Field's Most Successful Researchers

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ABSTRACT

Based on interviews with 17 pre-eminent North American adult education researchers, this paper presents data about their research orientations, support systems, how they generate research ideas, their writing processes and their publishing.

STATEMENT OF PROBLEM

While there are over 200 professors and 2,000 individuals with doctorates in the field of adult education (Griffith, 1983), few of these individuals are systematically conducting research and contributing to the knowledge base (Courtney, 1986). A study, by the authors, of the barriers to doing research experienced by Canadian adult educators indicated that a lack of confidence and understanding of research strategies were major deterrents. Considering the importance of research to the viability of adult education (Plecas & Sork, 1986; Rubenson, 1982) the purpose of this research was to study how the most successful researchers in adult education actually conduct and publish their research. It is anticipated that the results could do much to help and encourage those who want to become more actively involved in adult education research.

METHODOLOGY

Using the results of a widely distributed questionnaire soliciting concerns about doing research in adult education, the authors developed and field-tested an interview protocol and then subsequently interviewed seventeen of the most prolific and pre-eminent adult education researchers in North America. Sample selection was based on the number of articles/papers within the last five years in six of the more widely distributed adult education publications (Adult Education Quarterly; AERC Proceedings; Lifelong Learning; Studies in Adult Education; Convergence; and The Canadian Journal of University Continuing Education). An additional four individuals were added to the sample because of their long standing and significant contributions to the knowledge base of adult education, particularly in terms of their book contributions.

One of the objectives of the study was to gain insight into the "real-life world" of the researcher, as perceived and experienced by the individual. Because no substantive theory was available, the study was cast in the "context of discovery" (Kaplan, 1964). Grounded theory, as formulated by Glaser and Strauss (1967), and made more explicit by Schatzman and Strauss (1973), Bogdan and Taylor (1975) and Mezirow, Darkenwald and Knox (1975) provided the methodological framework. Using the protocol, but allowing for new and unanticipated discoveries, both authors participated in audio taped telephone interviews with the subjects. Duration ranged from 75 minutes to 120 minutes. Data were analysed independently by the investigators, providing greater assurance of validity. The following results represent only the essence of the interviews; due to space limitations, the richness of the findings cannot be adequately portrayed in this paper.

DESCRIPTION OF DATA

The results of the study are reported under the headings of background, research orientations, support systems for successful research, generating research topics, the writing process, and publishing.

Background

The publication record of the 17 researchers interviewed showed that they had each published an average of 38 articles, 9 book chapters, 4 books, and 6 monographs. Their time given to research averaged 30% while 37% was given to teaching; the remaining time was divided between administration, programming, and other activities. Finally, the average number of years as an active researcher in adult education was 18.

Eleven respondents perceived themselves primarily as researchers/writers, while five others labelled themselves as both researchers and teachers, and one primarily as a professor. Four of the participants preferred to describe themselves as writers, even though they were doing theoretical or conceptual research in adult education. The label researcher/writer is used here to capture research in a broad context which included both empirical and conceptual research.

Fourteen interviewees indicated that their graduate training had an influence on their success as a researcher and most indicated they had graduated from institutions where doing research was a tradition. With regards to satisfaction of time available to conduct research, over half desired more time. They carried an advising load of nine theses students, but the range was from five to twenty students. Only two researchers felt that graduate students were a hinderance to their research productivity. A majority encouraged or even insisted that their graduate students conduct research and publish before they graduated, and in some cases, they co-authored work with their graduate students.

Research Orientation

Using the Merriam and Simpson (1984) classification of research methodologies (experimental/descriptive; historical/philosophical; ethnographic/case study/grounded theory; and interactive/ecological/futures), the participants were asked how they would classify their research. Most selected more than one category or else provided their own label. It seems clear, with few exceptions, that these individuals use a variety of methodologies and the choice seems to depend on the nature of the problem at hand. Many had used, and felt comfortable with, both qualitative and quantitative methods, perhaps challenging earlier assumptions in the literature that qualitative and quantitative research are incompatible.

Support Systems

Only a few of those interviewed were part of formal institutes or research teams. However, virtually every individual had some informal network and many of those contacts were beyond their own institutions. Those with whom they networked included colleagues at other universities, former students, junior colleagues in their universities, and doctoral students whom they supervised. As one interviewee described it, a sort of an "invisible college" existed. They all felt that such networks were valuable and even essential in developing and carrying on research. Every individual belonged to at least some formal organizations related to adult education research (e.g. AERC, CASAE, Commission of Professors). Only two felt that these contacts did not contribute to their research. The relatively small community of adult education researchers was said to contribute to a sense of belonging and communication. The down side of this, however, was that such a small group could become incestuous and new ideas may not permeate the research community.

The majority (10) did not often collaborate with others when doing research. Those that did collaborate extensively, reported that they had had a positive experience and felt that they did better work as a result. Some problems with collaboration which were reported included the efficiency of the process, deciding who does what, and whose name goes first. It appears that collaboration is more prevalent and successful with empirical than conceptual or theoretical studies. By necessity, gathering data requires or makes it more fun to share the responsibilities. On the other hand, conceptual writing appears to be best done in solitude and at one's own pace.

Considerable attention in recent years has been given to the concept of mentoring in the academic and research setting. This study found that most of the 17 researchers interviewed had experienced a mentoring relationship in the sense that they had a mentor. Nine indicated that in some way their mentors had enhanced their research productivity. Similarly, all indicated that in some way they saw themselves as performing the role of a mentor. Fourteen cited present students as those people they were mentoring. The common thread appears to be that mentoring most often occurs between graduate students and supervisors, although in some cases this mentoring relationship could extend to junior colleagues and others.

Because of the difficulty in attempting to develop a definition of mentoring, the authors allowed the interviewees to make their own definition, and in some cases, they assumed that mentees included graduate students. It is obvious that what is conceived as a mentoring relationship varies considerably. The nature of the relationship is very idiosyncratic and depends on the characteristics, abilities, and needs of the individuals as well as the structure of the organization.

It was apparent that while mentoring included academic and career assistance, it spilled into other areas such as motivational and personal concerns. It was also apparent that in many cases a close personal bond developed and changes often occurred in the mentoring relationship over time. Several commented that while mentoring began as a supervisor-student relationship, these relationships changed to one, for example, of being a junior colleague or an equal partner.

Generating Ideas

It is often assumed that the most important aspect of research is asking the right questions. Very much related to this is how researchers generate questions and ideas for research. From the highest to the lowest frequency reported, the sources of ideas for research included the literature, colleagues, teaching, practitioners, advising students, reflection, and conferences. While the literature in the field of adult education was cited frequently, it was followed closely by several other sources. In fact, other than reading the literature and reflection, it is interesting to note that the remaining sources of ideas were all gained through interaction with others and were in total cited more than double that of such solitary activities as reading and reflecting. The thought was expressed several times that once one was established in a line of research it "just kind of keeps generating itself."

The largest majority tended to stay with their research interests and did not attempt to tap into current trends or themes in the literature simply as a means of obtaining attention. If they tapped into the literature it was because they felt that the literature touched their on-going lines of research.

Only three of the researchers interviewed had just one line of research. One interviewee commented that "adult education by definition is a sort of a generalist activity." This generalist approach has some real dangers

associated with it in conducting systematic research. While the respondents appeared to have had a certain continuity, there was still a concern expressed that too much research was opportunistic and disjointed. Two researchers advised young researchers that if they are going to contribute to tested knowledge in the field they "should pick their area of specialization and stick with this, develop a research problem, and do not specialize in more than two areas."

The relationship between researcher and practitioner is of on-going interest to the adult education field. Virtually every researcher interviewed felt that for most types of research (perhaps with the exception of historical) having had some experience as a practitioner or direct contact with practice was preferable and helpful in generating research. It was generally felt that the research would be better informed and there should be "a constant interaction with practitioners and the real problems of the field." Without exception all felt that there was a role in research for the practitioner. Perhaps ideally "either of them should have 30% of the other."

Financial Support

Asked whether financial support was ever a barrier to conducting research, most felt they would do their research anyway and at worst it would simply delay completion. Several went so far as to suggest that outside funding may not be an asset in that one may begin "chasing the Federal dollars instead of chasing the right research question".

The Writing Process

It would appear that there are two typical writing styles in which our interviewees were more or less evenly divided. In the first style the researcher creates a detailed outline based upon a systematic review of the literature and discussion with colleagues. This individual often has an idea of the length of each section and does not leave a sentence or paragraph until s/he is happy with it. The creative process takes place during the planning stage, and as a result, the first draft is very close to the final draft. The second style is typified by the individual who begins with only a theme or idea and a sketchy outline. This person writes quickly, finds the writing process creative, often gains insights while writing, and is often not aware of a consistent pattern to his/her writing. Usually, several drafts are involved. It was also found that individual writing styles do not change much whether engaged in writing books or papers.

Most of the researchers blocked time to write and preferred a minimum of three hour blocks. They preferred to write in a particular place (e.g., house, library), but only two stated that they consistently wrote in their office. The most frequently reported number of drafts of a manuscript was three, although some revised parts of a manuscript extensively (7 to 30 times) before they were happy with it. While most believed that it is a good idea to get colleagues to critically read their manuscripts, few do it. This appears to be a function of their experience; that is, while they have asked colleagues to read their manuscripts in the past they have since developed the necessary skills and confidence and therefore do not feel it is now necessary. Other reasons why they did not use colleagues as often as they said they should included: finding colleagues whose opinions they respected; not wanting to impose on busy colleagues; and "it simply takes time to do it." It should also be noted that for books, a more critical review process apparently takes place. And finally only four interviewees used a word processor.

Getting Published

The interviewees were asked how they decided on the journal to which they would submit a manuscript for publication. The primary criterion was the

audience that the journal served. A secondary criterion was the reputation of the journal itself. It would seem that most of these authors are concerned about communicating with their colleagues and people interested in their research. Most would not submit research for publication unless they felt it was complete. If a paper were rejected they would most likely send it somewhere else, usually without revision. They are often very firm and clear in their ideas and it is not uncommon to file away papers that were accepted conditionally with revisions simply because they couldn't be bothered to make revisions or they disagreed with the new slant that would be given to the article. A common reaction to rejection is reflected in this comment:

I have had them rejected and its a dismal feeling and I get angry...

Some seek the reasons for rejection outside of themselves as this interviewee, tongue-in-cheek, expressed:

My first reaction when I get a rejection is first I question the ancestry of the reviewer; next I wonder how he ever learned to write if he was that stupid!

While most of us have likely experienced similar emotions, more serious advice can be found in the following reaction resulting from a rejected article.

Mainly, I ask myself the question, "How important is it that that sees the light of day?" "Is there a message I ought to heed coming from the reviewer?" And then I try to decide if I want to try and rewrite for that publication or one that is similar, or whether there is a more appropriate or a more likely publication outlet.

It might be encouraging to note that only a couple of the prominent researchers interviewed stated that they never had a rejection. Most have had several rejections, particularly early in their career, but they learned from the experience, persisted in submitting manuscripts and now rarely receive rejections.

Of the researchers interviewed, most do not approach journal editors. Some felt it would be alright if they were not sure of the guidelines, but four felt that it was unethical to approach a journal editor. The consensus was that it often takes an inordinate length of time to get a paper published and basically little could be done unless the number of journals were increased. Other suggestions to the slow turn-around time were to speed up referees and raise standards. The best advice to the novice researcher was to know what type of articles a journal published, its audience, and its style. The second piece of advice was to choose a worthwhile problem. Finally, to improve ones chances of getting published, it was suggested that novice researchers write a readable paper and have others critically review it, preferably by "your three worst enemies".

Personal Descriptions

While most of our respondents held a doctorate in adult education they also felt that it was somewhat fortuitous that they ended up in adult education. Typically they were offered a research assistantship in adult education as a graduate student, had taught an adult evening course, or worked with adults and became interested in the area. Their interest in research developed in their doctoral work and was encouraged by their supervisors/mentors. Invariably this lead to university positions where research became a responsibility as well as an interest. The most frequently reported milestone in establishing their research careers was their first publication which proved to be a great reinforcer in changing their self-perceptions from that of a practitioner to that of a researcher. Other milestones reported

were obtaining a university position, tenure, awards, and working with a particular colleague.

CONCLUSION

It would seem, after having analyzed all of these interviews, that the most important general piece of advice for budding adult education researchers is that they should be asking the right questions and become more concerned with quality research as opposed to, as one respondent suggested, "publishing articles that add to the noise but don't add much to our knowledge and understanding of adult education." Another stated that we seem to have a production mentality and "the whole system is geared up to reward people who produce a lot rather than produce quality". However, at the same time we must note that there are only a handful of devoted researchers in adult education, regardless of the quality of their work. It seems clear, as Courtney (1985) suggests, that we need more researchers producing quality research if we hope to become more than an emerging discipline.

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PROFESSIONALIZATION AND PROFESSIONAL CERTIFICATION:
A RELATIONSHIP

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ABSTRACT: A relationship between professionalization and professional certification can be established that can guide adult education to a higher level of professional status. A "Professionalization Grid" will also be provided which demonstrates an operational relationship of the basic elements of professionalization.

Historically, occupations have been measured on the basis of importance and difficulty of tasks that are associated with them. Today, occupational classifications include professional, semiprofessional, paraprofessional, skilled and unskilled. Within each of these classifications is the element of service to others, since few if any individuals possess the knowledge and skills needed to be self-sufficient in meeting their own needs. Therefore, the difference between classifications of occupations is not the elements of service, but in the nature of service. In addition, the growth of service occupations and the popular generalization that occupations are becoming professionalized, research is necessary to determine the components of the professionalization process and their relationships to one another.

Professional certification is viewed as a vital mechanism in the evolutionary process of professionalization because it focuses attention upon the vital competencies which constitute an occupation. These identified competencies can be used as a self assessment tool for practitioners as well as a basis for defining an emerging field. Competencies also provide academic and professional preparation programs with information for program development and can aid employers in identifying qualified practitioners. The scope of this paper is to demonstrate the relationship between professionalization and professional certification. It is therefore essential to define the terms professionalization and professional certification as a necessary component of that relationship. Vollmer and Mills (1966) defined professionalization as an evolutionary process which introduces an organized and systematic approach to the development of an occupational field as it moves toward professional status. In addition, Farmer (1974) defined professionalization as "the dynamic process whereby an occupation can be observed to change in certain crucial characteristics in the direction of a profession" (p. 58).

During the past several decades, the term "professional certification" has been used to describe a process of separating practitioners who are competent, individuals who are capable and qualified to perform the duties and tasks of

their respective roles, from those who are not. Galbraith and Gilley (1985, 1986) defined professional certification as a voluntary process by which a professional association or organization measures the competencies of individual practitioners. It is often confused with accreditation, certification, and licensure. Accreditation is a voluntary process by which an independent agency grants recognition to an education program or institution. Certification is also a voluntary process by which an independent agency recognizes the competence of the individual. Licensure is a mandatory process by which the government permits the individual to practice in designated professions. Its primary purpose is to protect the public from incompetent practitioners. While each of these processes attempts to regulate the measurement of competencies, the methodologies, populations and purpose of regulation differ. The primary purpose of both accreditation and certification is to focus favorable attention upon competent institutional programs and individual practitioners. Unlike licensure, the establishment of accreditation or certification does not restrict practice in a given profession. Regardless of the obvious distractions between the three terms, practitioners continue to use them interchangeably.

PROFESSIONALIZATION AND PROFESSIONAL CERTIFICATION RELATIONSHIP

The relationship between professionalization and professional certification was determined through a comprehensive examination of 85 professional certification programs and their impact(s) upon their occupational fields. The history of 18 occupations which revealed a common process by which they developed and a literature review from an sociological, philosophical and practical view of the professionalization process was also examined. Professional certification has been perceived as an essential component of professionalization by professional associations which maintain certification programs as well as the occupational fields examined. Professionalization can be approached from four perspectives: a philosophical orientation, a developmental perspective that is comprised of various stages, a characteristics orientation, and a nontraditional approach. Each of these orientations provides insight into the evolutionary process of a profession.

Various schools of thought comprise the philosophical orientation to professionalization. The traditional model of professionalization, which consists of coordination, leadership, extension of schooling, certification, accreditation, and licensure, has been challenged by a less-formal approach (Carlson 1977). Emphasis is placed upon individual freedoms and the democratic society as opposed to the packaging and marketing of "official knowledge" disseminated by often self-appointed and self-serving experts in a discipline. According to this philosophical approach, professional certification would not be viewed as a viable component because of its controlling and restrictive nature. Attitudinal orientation is another philosophical approach to professionalization. This philosophy builds upon the construct that individual attitudes of professionalization, sense of calling, personal freedom, public service, and self-regulation will determine the level of professionalization. Based upon these five areas, individuals can evaluate the status and prestige of various occupational groups. This approach accepts the tenet of self-regulation and control, which can include

professional certification as well as other forms of diagnostic evaluation. Another philosophical orientation to professionalization is eclecticism. An eclectic approach uses procedures, techniques, methods, and concepts from a variety of sources, systems, and schools of thought. Eclecticism accepts the belief that a single orientation is limiting and that the use of numerous procedures and concepts can better serve the individual and the profession. From this philosophical base, professional certification would be an alternative depending upon whether the individual or profession believed it to be advantageous.

Professionalization can also be viewed from a developmental perspective; that is, a profession evolves through distinct stages in an effort to achieve optimal professionalized status. In addition, a profession would consist of specific characteristics that can serve as a checklist in the differentiation of occupations. These two components constitute the basis of the developmental orientation. Wilensky (1964) referred to this evolutionary process as the "Natural Process of Professionalization". He described the process as follows:

There is a typical process by which the established professions have arrived: men begin doing the work full time and stake out a jurisdiction; the early masters of the technique or adherents of the movement become concerned about standards of training and practice and set up a training school, which if not lodged in universities at the outset, makes academic connection within two or three decades; the teachers and activists then achieve success in promoting more effective organization, first local, then national through either the transformation of an existing occupational association or the creation of a new one. Toward the end, legal protection of the monopoly of skill appears; at the end a formal code of ethics is adopted. (p. 139)

The process implies that as a profession evolves it strives to achieve "ideal professional status" (Brown 1984, p. 99).

Professionalization can also be viewed from a perspective that uses identified characteristics to assist in the evolutionary process of a vocation toward professional status (Vollmer and Mills 1966). Houle (1980) extended this perspective by identifying 14 characteristics that were "broadly associated with the professionalization process" (p. 34). He divided these characteristics into conceptual, performance, and collective identity characteristics. Credentialing was identified in the collective identity characteristics group, which consists of "systems and structures that foster and maintain conceptual and competency characteristics" (p. 49). Houle viewed credentialing as an important means of identifying practitioners who have the capacity to perform at an acceptable level. From the characteristic perspective, professional certification may be viewed as an acceptable credentialing mechanism within the professionalization process.

The fourth perspective challenges the traditional model of professionalization

by advocating that the individuals who comprise an occupational group should determine the tenets of their profession (Cervero 1985). This nontraditional perspective maintains that the members of a discipline are able to discern the unique characteristics and needs of the occupation. Because of this awareness, they are better able to identify the essential elements that constitute what they believe to be a profession. The nontraditional approach to professionalization seriously questions the importance of any credentialing process because it cannot adequately measure the diverse dimensions that encompass a specific occupation. In addition, this orientation may or may not embrace the tenets of the philosophical, developmental, and characteristic perspectives unless viewed as essential by the members in the development of their professional identity.

Clearly from three of the four perspectives of professionalization, (philosophical, developmental, characteristic) professional certification can be an essential element within the professionalization process. This reinforces the historical view regarding the relationship between professional certification and professionalization.

THE PROFESSIONALIZATION GRID

Professionalization and professional certification processes consist of three common components: level of knowledge/competency enhancement, level of importance of the occupation to society, and level of control by members of the occupation. To obtain professional status each of these components are evident. For example, the legal profession requires that potential candidates complete an academic program which ensures that a high degree of knowledge has been acquired. In addition, the legal profession has established a regulatory mechanism, the bar exam, which each potential member must successfully complete prior to the initiation into the legal community. Because society has endorsed and encouraged the specificity of the legal profession, it recognizes the significance and importance of the profession to society. While not all occupational groups have obtained the level of professional status, each can utilize the three components of professionalization and determine their present status.

The "Professionalization Grid" consists of the three components of professionalization which reflects the operational relationship of the various occupational status levels. Each of the occupational levels is represented by a series of three numbers. The first number represents the level of knowledge/competency required of each member in order to participate in an occupation. The second number represents the level of importance that society places upon the occupation. Finally, the third number reflects the level of control which members of the occupation place upon others prior to entering and practicing the vocation (see Figure 1).

The relationship of professional certification to the three components of the professionalization process is evident and congruent with the purposes for the development and maintenance of certification programs. The three major purposes of professional certification are to increase the competency level of practitioners, to control or restrict the number of qualified persons entering

the occupation, and to increase the importance of the occupation to society.

The implications for the field of adult education lie within the integration of the three common components of professionalization. Therefore, the adult education field must address their present status in relationship to the level of knowledge and competence required of practitioners, the level of importance as viewed by society, and the level of control by the profession regarding entry and practice of their membership. Once the status is determined concerning these three components, adult education should consider what action, if any, is appropriate in order to move the field to a more professionalized status. One appropriate action would be the endorsement of professional certification as a means of enhancing and improving the professional status of the field. Based upon the fact that a strong relationship exists regarding the principal tenets of professionalization and professional certification processes, the development of a long range strategic plan, which includes a professional certification program, seems warranted if the field of adult education is to obtain professional status.

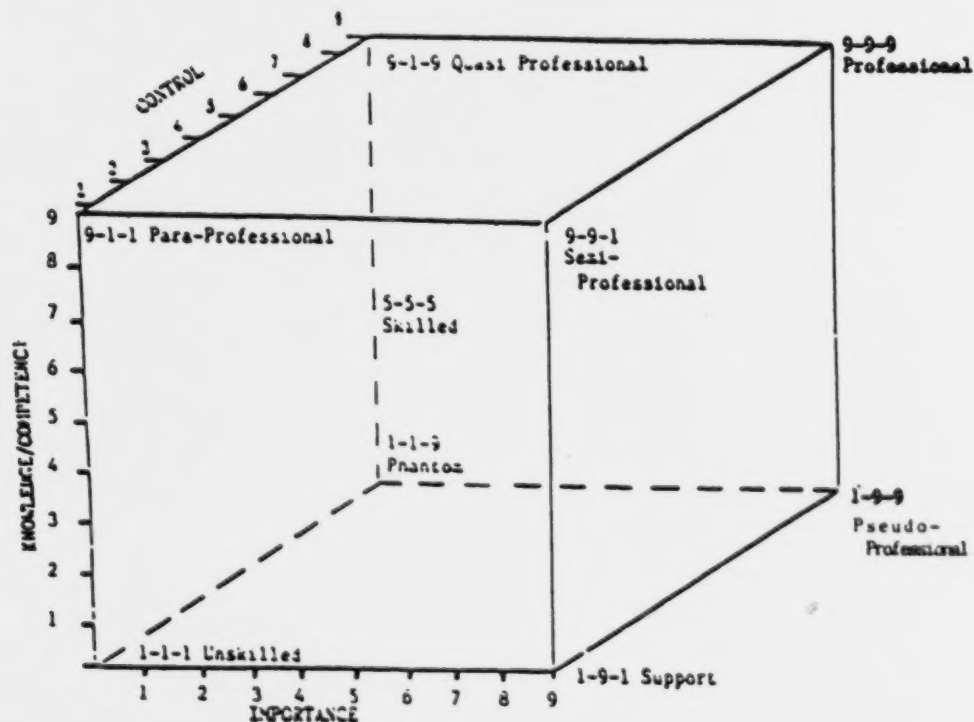


Figure 1: PROFESSIONALIZATION GRID

Knowledge/Competencies = 1st Number
Importance = 2nd Number
Control = 3rd Number

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GENERATIVITY IN MIDDLE ADULTHOOD

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Abstract: This qualitative, descriptive, phenomenological study sought to better delineate Erikson's phenomenon of generativity as it evidenced itself in the lives of 13 study participants ages 41-77. The concept of generativity has many positive implications for both adult educators and society.

INTRODUCTION

The compelling issue of a greatly extended life time for most adults brings with it a sense of urgency which has never faced humanity before. Currently the issue of life extension is fraught with fears and questions. What does it mean to be old? What is it like to be on the way to growing old, to be in middle life, young no longer, but certainly not yet old? Jung (1933) decried the absence of preparation for people as they embark on the second half of life. Uninformed, they often make choices which contribute to their becoming "hypochondriacs, niggards, doctrinaires, applauders of the past or eternal adolescents" (p. 109).

GENERATIVITY

Respected theorists on the development of the adult personality over time such as Erikson (1950), Jung (1933), Maslow (1962), Ortega y Gasset (1969) and Vaillant (1977), have posited that adulthood is a time of continuous change. Generativity emerged as an important concept in adult developmental theory in 1950 when Erikson published his seminal work on human development from birth to death. Erikson (1950) posits three concepts: (a) development is psychosocial, in that the individual must establish new basic orientations to both the self and the social world; (b) personality development continues throughout the whole life cycle; and (c) each stage involves choice, and thus it has positive as well as negative components. Adulthood is broken into three periods: early, middle, and late. The middle of life is that nebulous time between youth and old age to which researchers assign various years. The life task in middle adulthood, according to Erikson, is the choice between generativity or self-absorption which leads to either hope or despair in old age.

Through his concept of generativity in middle adulthood, Erikson points to the phenomenon experienced as the person begins to be concerned with others beyond the immediate family, with future generations and the nature of the society and the world in which those generations will live. The cultivation of generativity and the development of its associated virtue, caring, paves the way for a useful and rewarding future while at the same time avoiding self-absorption and its companion, stagnation.

PURPOSE

The purpose of this study was to better delineate the phenomenon of generativity in an attempt to identify or operationalize its major characteristics, attributes, determinants, situational or circumstantial variables. Without clearer understandings, needed articulation of the choices inherent in middle adulthood and the consequences of those choices are hindered. The decisions of middle adulthood affect not only individual lives but the larger society of which they are a part.

METHODOLOGY

After careful consideration, it was decided that the phenomenological paradigm would be most appropriate in obtaining the kind of data capable of adding to the research base on generativity. Phenomenology is a qualitative research model which is exploratory and discovery oriented and its methods attempt to study human experience as it is lived out in normal daily activity. Phenomenology also recognizes the value of a number of people subjectively concurring (Zaner, 1970); this agreement from multiple individual realities is known as intersubjectivity or confirmability (Guba, 1978). It follows then that the intersubjectively agreed-upon issue or aspect is in all probability trustworthy (Guba, 1978).

SAMPLE

Study participants were selected through the process of confirmability, as having something to contribute. There was no special effort made to choose study participants with any particular mix of sex or background; yet, as the selection process progressed, a diversified mixture naturally occurred. There were 13 participants, 7 male and 6 female. They ranged in age from 41 to 77 and in income levels from \$5,000 to over \$100,000 annually. Various ethnic backgrounds including Jewish, Black, and Anglo-Saxon were represented, as were different religious traditions including Catholic, Protestant, Jewish, and Ecumenical.

These individuals were interviewed in depth and observed using the paradigm of phenomenology to perceive and describe the complex phenomenon of generativity as evidenced in their lives. Tapes of the interviews were transcribed and analyzed using the combination of a constant comparative method with phenomenology. From this process, categories descriptive of the phenomenon were inductively derived.

FINDINGS

The findings on generativity in middle adulthood can be presented in three general categories: (a) roots of generativity, (b) transition experiences, and (c) maturing generativity.

ROOTS OF GENERATIVITY

Because caring is the predominant virtue associated with generativity, it was of particular interest to trace elements of caring in the formative events of the lives of participants. Three subthemes emerged when considering the roots of caring, they were: participants all experienced being cared for in childhood, they observed caring for others as they matured, and they had difficulties in childhood which fostered an empathic quality.

Sources of Caring in Childhood

Even though all participants could recall experiences of caring, there was a wide variety in the sources for caring. Some found much caring in their family of origin. One woman who was born into a black family over 60 years ago, spoke of her feeling of being loved even though they were poor and there were 12 children:

I had a father I could be proud of even though he was only a common laborer. He could sing; he was very talented. My parents were together 54 years; ...they gave us good les-

sons. My mother took in laundry to help. We knew we were loved. We were punished when we did wrong, but somehow you got the message--you are loved!

Other participants spoke of home environments which contain a mixture of caring and hurtful behaviors. A man shared: "My family, especially my mother, was a social climber and persona oriented, always interested in how the family looked to outsiders." He also acknowledged: "I grew up in a very generous environment. My father was a really generous person; he gave of himself."

A third type of home environment which participants experienced was mainly negative, and the individuals suffered and sought support elsewhere. For example a dentist spoke of his father: "I hated my dad, he was too busy. He just didn't have time for us". However, he had a beloved grandpa: "I had a grandpa who was one of the greatest. He gave me the sense of being a kid and the joy of life!" Study participants often spoke of finding caring from grandparents, other relatives, or teachers.

Models of Caring for Others

In addition to the caring received, participants had caring for those beyond the home modeled for them. One example of this comes from a man, born in 1907 of newly immigrated parents. He spoke of the pattern of giving as set in his youth. In spite of modest circumstances, "Dad put money out for others. It is a tradition of our people that you take care of those who are less well-to-do". Many of the models were positive examples of tangible giving. But there were other models, negative models of prejudice and lack of respect for those who were different. These negative models outraged participants and formed lasting impressions which contributed to their caring activities later in life.

Childhood Difficulties Which Fostered Empathy

The final theme in this section on the roots of generativity is: participants had childhood difficulties which fostered an empathic quality. Some of these childhood difficulties rose out of racial prejudice or poverty, others from physical handicaps, parental inadequacies, or other painful life events. A few illustrative examples include: a musician who was blinded in an accident at age three, a businessman who felt like a victim all of his childhood because he was inept physically, and a participant who had to stay out of school because she did not have a pair of shoes to wear. These experiences of hardship and suffering appeared to foster an empathic quality in participants.

TRANSITION EXPERIENCES

Somewhere in life, most likely in the age 40 decade (it has occurred in adolescence for a few), a transition time beckoned study participants. The transition period was at times a dramatic event and at times a gentle unfolding, but after it was negotiated successfully, individuals could look back on transition experiences and see the shape of them. They could also see threads reaching back into early life, which in retrospect were viewed as preparation events for the transition. The transition time had three components, the pivotal event, a sense of calling and recognition of risks and consequences.

Pivotal Event

Transition times were launched by a pivotal event such as a personal or family crisis, or some other major dilemma. One example of a

pivotal event came from a man whose college age daughter wanted to take a trip he and his wife thought inappropriate for her. In order to divert his daughter's attention, he decided to take a medical tour to a Third World country, sponsored by his professional association, and invite her to join him. He said of the trip: "I was so impressed with the way she worked--it brings tears to my eyes. She was patting heads, holding hands, blood everywhere..." Because of the problem with his daughter, he was, in his words, "backed into it [giving generatively], but I tell you, it was the most thrilling experience of my life!" It was the beginning of many years of donating his time, money and expertise to needy clinics abroad.

Sense of Calling

After negotiating the pivotal event, and as a continuing part of that, a sense of call developed. This sense of call was a compelling urge toward expressions of caring. A business man exclaimed "I couldn't do anything else--you had to say yes!" Another spoke of his vocation: "It's chosen me, I almost feel as though I have no alternative!" Another man who mediates between peoples in the Middle East and elsewhere spoke of his sense of calling; "You just have to do it. You commit yourself to something if you have any sense of honor at all".

Recognition of Risks and Consequences

Eventually study participants found that they were led out of the safe, culturally defined roles into new territory. One woman who returned to school and became a Presbyterian minister spoke of things "being scarier,...it's newer ground for me. Now I am a woman pastor and a lot of people don't know what to do with me." She noted that her husband used to approve of her role in the home with the children. It was a "neat little package" but now there is a strain on this primary relationship.

A businessman who was president of a multi-national company told of some of the risks in his transition experience. He quit his prestigious position at age 53 to become a full-time volunteer. He stated:

I knew that I was right on the edge of the highest earning period of my life, but in spite of my [materialistic] sense of values developed in the depression, it was of no consequence that I was giving up that kind of money.

Instead, he put into form a tender idea which could facilitate the starting of small cottage industries in Third World countries. Now, his idea is responsible for starting over 2,000 small businesses, but in the beginning he did not know whether it would work or not, as he said "It was only an idea..."

Others spoke of some consequences of their generative activities "I would like not to have to be way out there. I get lots of flack and people don't like me." Another observed "Stepping out of culturally defined behaviors--it's a risk--it requires a high degree of faith."

MATURING GENERATIVITY

World View

Over time the process of maturing generativity developed more fully in participants. Four components of maturing generativity emerged, the first included the formation of a view of the world which supported the individual's life experiences. It also formed a structure from which to understand the polarities in life, the creative and the destructive, which were inherent in themselves and the outer world. Those in maturing generativity had a world view which left agnosticism behind and embraced a

deep commitment to the spiritual aspects of life. They recognized the oneness of all creation under God, that all peoples are God's children and therefore brothers and sisters.

A few brief comments hint at the world views participants had formed. A Jewish man stated: "The Almighty has a way of looking after you." A Protestant woman noted: "It's everything, the Higher Power I connect with." Another who sees himself as Ecumenical affirmed: "I'm on a journey with God. I want to please God. I know I have been gifted."

Caring Behavior and Its Rewards

Rewards for the expansion of caring behaviors was the second component in maturing generativity. Persons found themselves reaping rewards which contained both suffering and joy.

Joy included a zest for life, a gathering of wisdom and an unshakable sense of personal value and meaning. Generative persons clearly enjoyed the challenge of their chosen activities. One stated his philosophy: "It's therapeutic to give. It's been the most fulfilling part of my life--the most fulfilling part!" Another comment from a former jet setter:

There is an intrinsic joy in making generative moves which comes out of our inner soul. I am so much happier doing generative things. It's a satisfying way of life. I could not go back to golf and to making money.

Another of the rewards of maturing generativity was that generative persons found each other and became the network of caring support for one another which was needed to continue in the work which had come to them.

The painful elements included caring to the point of risking personal convenience, safety, finances, and the misunderstanding of significant others in the fulfillment of caring activities.

Self-Understanding

The third factor in maturing generativity was the ongoing process of self-understanding. Elements of self-understanding included something of how study participants integrated their backgrounds, their mistakes, their successes. Evidence of the integration process emerged from the interviews in comments like this: "I've had to forgive mother; I feel quite healed" and, "I always said I'll never be the kind of father my father was to me--and, of course, when I grew up, I was. That was my patterning. I've had to forgive him."

Self-understanding also includes awareness of personal limitations. Learning to value and respect themselves in spite of the fact that they are limited in what they can accomplish is vital to maturing generativity. They are not martyrs or do-gooders. In self-understanding there was the ongoing process of value shifts. This could include a simplification of the material and social aspects of life, an increased pleasure in and respect for nature, a tolerance for change, for differences, and the desire for time alone to think, to be quiet, and to meditate.

Hopes and dreams were the fourth component in the generative personality. There was an attitude of hope in the future in spite of reports of gloom and doom. Study participants had many dreams, playful dreams, serious dreams, dreams for service, for themselves, their loved ones, and their planet home.

CONCLUSIONS

Five conclusions emerged from the findings. They were: (a) childhood experiences are not necessarily predictive of adult generative behavior, (b) maturing generativity looks fairly homogeneous, (c) generativity is triggered by a pivotal event, (d) women function as a catalyst for significant others, and (e) the quality of caring essential to generativity includes suffering and joy.

IMPLICATIONS FOR ADULT EDUCATORS

Adult educators practice in a field that has long been concerned with the growth and development of individuals. They could become an important key to facilitating adults toward generativity by increasing their own understanding, awareness and knowledge of the middle years. The following discussion focuses on three challenges for adult educators.

Challenge one: How can adult educators promote the prospects of fostering generativity in themselves and in others during middle adulthood? Generativity needs to receive some visibility. Perhaps adult educators could begin to highlight the benefits of generativity both personally and societally. Highlighting generativity's counterparts, self-absorption and stagnation, might be effective. Images of negative aging in Vaillant's (1977) work alone are impressive. His Worst Outcomes (non-generative) group had more career problems, little evidence of friends, high use of alcohol and/or tranquilizers, more evidence of psychopathology, more marital struggles, inability to help children start life well, more chronic physical problems in middle years, more loneliness and deaths than his Best Outcomes (generative) group.

Challenge two: How can adult educators facilitate adults' ability to design and consciously shape their lives toward fulfilling their creative potential? There are at least two ways to address this challenge: one is through the personal model which the educator provides, and the other is through programming designed to facilitate growth and development in adulthood. Questions arise: How does one fulfill both personal and professional levels of generative behaviors? What would a generative adult educator look like? What impact could such an educator make that is not being made now?

Challenge three: How can adult educators design ways to harness the quality of generativity as a resource for facing the social challenges of today? Boshier (1981) warns that the problems of planet earth are matters of life and death. There is a need for an informed and generative citizenry who can participate in needed social interventions. Basic human needs can be fulfilled only by and through other human beings. Adult educators need to consider the power they have to model and teach in a practical way the spiritual, ethical, and moral values which are the common ground of all religions and without which, according to Erikson (1982), generativity cannot flourish.

This study has inspired a large sample, nationally representative survey which is in process through Market Facts, Inc. Chicago, Illinois.

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THE ELEGANT ARTS AMID THE COARSER PLANTS OF DAILY NECESSITY:
A RETROSPECTIVE VIEW OF A WOMEN'S STUDY CLUB 1885-1957

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Abstract

This paper explores the cultural and social interests of a women's study club over a 70 year period. It suggests that an analysis of sororal education, women teaching women, significantly broadens our understanding of the scope of adult education in the United States.

Introduction - The Early Context of Women's Clubs

The Coterie is a women's study group that began in April, 1885, in Fayetteville, a village located about six miles east of Syracuse, N.Y. Its purpose was "mutual improvement and a united effort toward a higher social and intellectual life." It took as its motto a quote from Washington Irving: "In America, literature and the elegant arts must grow side by side with the coarser plants of daily necessity." (Coterie Minutes, April 28, 1885, hereafter noted as CM followed by the date.)

Growing out of the missionary and benevolent societies that brought women together in the early part of the 19th century, clubs like Coterie came into existence during what historians call "the Club Movement." (Blair, 1980) This social phenomenon extended the acceptable female association of church groups to groups dedicated to cultural or service endeavors. Nineteenth Century women had the responsibility of maintaining the spiritual and physical welfare of their homes and families. As men became more involved in the business of industrial America, the responsibility for maintaining the nation's cultural well-being also fell to women. The meaning of "Home" expanded to include community and nation. Educated homemakers became "social housekeepers." (Woloch, 1984) Many women took this charge seriously. Their interpretation of their responsibility falls out on a continuum that lies between the radical feminists of the day like Elizabeth Cady Stanton or Matilda Joslyn Gage and those women who supported the "ideal of true womanhood." In either case, the boundaries of the female "private sphere" of the home and the male "public sphere" of government, business, science, or higher education began shifting.

Women's organizations became a vehicle for both ends of the continuum. Women of all persuasions understood that education was important to their efforts. Not surprisingly then, their clubs and organizations placed education at the center of their programs. Sorosis, a New York City women's club founded in 1868, and the New England Women's Club founded in Boston the same year, were the progenitors of thousands of such clubs that sprang up across the country between the 1870's and the 1890's. Many years later, the Adult Education Handbooks for 1936 and 1948 (Ely, 1948; Rowden, 1936) would acknowledge the educational efforts of women's clubs and even suggest that adult educators might pay more attention to such "natural autonomous groupings," but the handbooks did not give an analysis of the cultural dynamic of the clubs. What was the interplay between women's clubs and their society? What was the nature of adult education in these informal settings? The Coterie's history tells us what these women responded to in themselves and in their world. More importantly, it helps us see how the members and their world interacted to shape a particularly durable form of nonformal adult education. This paper approaches these issues through an analysis of the Coterie's activity in relation to the club's motto and stated purpose.

Methodology

In order to examine the history of the Coterie, I studied the club minutes and programs for the years 1885 to 1957. To describe the club over time, I paid particular attention to the topics,

organizational features, community connections, member relations, and learning/teaching activities recorded in the minutes. In addition, I contacted current members of the club, interviewing some on the club history as well as observing several of the club's meetings. I used secondary sources such as histories of other organizations, analyses of the time periods, and organizational publications (e.g. those of the New York State Extension Library) to gauge the strength of connections between Coterie life and outside events.

The Coterie

The founding members of Coterie, Mrs. Harriet Wilkin and Mrs. Mary Collin, belonged to a couples' Shakespearean club that adjourned for the summer months. Rather than stop meeting, however, these two women recruited several friends who were interested in having a women's study club over the summer "for the purpose of pursuing a prescribed course of reading." (CM April 28, 1885) In the fall, they intended to disband this "Social Art Class" and reconvene the Shakespeare Club. The neighbors and fellow Presbyterian women who joined with them liked their taste of studying Italian art and culture and decided to make "this new child of their affections" a permanent organization. Thus in October 1885, the "Coterie" came into existence. From the beginning, the Coterie approached its purpose with a sturdy organizational structure. A constitution outlined officers' job descriptions, delineated members' responsibilities, permitted expenditures, and provided the framework for amending the constitution and by-laws. Membership was by invitation and was limited to twenty-five, later to rise to thirty-five.

In keeping with the multitude of other men's and women's clubs of the day, the Coterie met twice a month, usually in the afternoon at the home of one of the members. The club's study "year" averaged fourteen meetings from September to June. Two members, elected by the members as "directors," planned the year's study based on an annual theme. They assigned topics to some members for presentation and the job of hostessing to other members according to a rotary system. Occasionally, an outside speaker made a presentation. In the 1940's, the club dropped year-long themes and members presented papers on topics they selected individually or in consultation with a director. Commenting on the first months and years of Coterie work, Harriet Wilkin (1935) wrote the following:

It was a time of intellectual activity among women all over the land...How vividly I remember the work of those days! Our home-made map of the city [Florence] with the winding Arno painted such a blue 'as never was on land or sea!' Our synopsis of Italian pronunciation, printed on slips by the courtesy of the village paper; the photographs sent by the Sonle Company of Boston to show us the work of the artists we were studying; and our increasing satisfaction in the new world of culture that was opening before us. Not one of us a college woman, we were all well acquainted with 'the coarser plants of daily necessity' - these readings stimulated our minds and gave us an outlook upon a wider world.

Literature and the Elegant Arts

This "new world of culture" that contrasted to the coarser aspects of daily life was based on literature and the other elegant arts associated with 19th century liberal education. To bring about a united effort toward a higher social and intellectual life, the Coterie began, therefore, with the recognized source of culture, Europe. "After some discussion with regard to material available, for information on the various subjects that would come before the society, it was finally decided that we take up the study of the Artists of the Italian School." (CM April 28, 1885) They studied the art, history, literature, architecture, and culture of Italy (1885-1887), followed by England (1888-1894), and then Holland (1895). After spending three seasons on France (1896-1898), the club began what would be a five-year study of American history (1899-1903). In 1904, their view of the world extended to Japan; in 1905, Russia.

Any aspect of intellectual or cultural life was of interest to the Coterie: Raphael, the ruins of Rome, the Saxons, Chaucer, The Merry Wives of Windsor, Tennyson, the Dutch schools of Art, Dutch customs, French literature of the Renaissance, Marie Antoinette and the Dolphin, the New England Poets, Mikado Palaces, Statesmen of Japan, and Russian nihilism. The club read plays and poems aloud. They played, sang, or listened to music from various periods. They examined illustrations and prints from representative schools of art. They read aloud biographical sketches and summaries of factual information. "It was urged that each lady endeavor to bring in some fact, legend, or bit of poetry, or anything, bearing upon the subject." (CM April 28, 1885) Many times, what the members brought were their personal experiences - their own travel memories, or those of friends and fellow-members who wrote home to share impressions of sites seen abroad. In fact, the 1885-1957 minutes repeatedly note how the club valued a personalized approach to topics.

For Coterie, an improved intellectual life was linked to an improved social life and so sociability was another aspect of culture that Coterie women fostered, principally among themselves but also in relation to their community. Several shades of meaning of the term "sociable" and "social" apply here: friendliness, providing opportunities for conversation and conviviality, and being a part of the community. Tea breaks, social hours, luncheons, joint meetings with Philomath (a sister study club), and occasional "open evenings" (where husbands or guests might be invited) were the ways in which Coterie sustained the elegant arts of hospitality and graciousness. Hostessing was the companion responsibility to preparing the day's program. Consequently, the minutes almost always recognize and thank the individuals who prepared the tea and sweets for the meeting. It was often over cups of tea that members continued their discussion of the afternoon's program. Even the restrictions of war-time rationing failed to alter this aspect of Coterie life. Members had to bring their own sugar from time to time or cut back on the offerings, but the social part of the afternoons continued.

The Coarser Plants of Daily Necessity

What were the harsher elements of life that the Coterie sought to balance with their literary and social activities? The early minutes talk about the weather. Blustery winter or stormy spring afternoons made getting to a meeting a feat in its own right. Women's work in or out of the home is another area that contrasts what went on within the study club. For instance, summer activities interrupted the club's study of English history just after "the death of 'good Queen Anne'" when "...the time had come for jellying and canning and catsuping - and these 'coarser plants of daily necessity' demanded immediate and careful attention." (CM Sept. 21, 1891) Illness and death also touched the Coterie. Since many women were members for ten, twenty, and thirty years, the death or prolonged absence of a member made a difference. The club "circle" was broken and friendships were lost.

Finally, daily necessity was present in current events. Although the club voted in the 1890's to include a ten-minute period on current events, a consideration of contemporary events remained outside the club's notion of mutual improvement or a higher social and intellectual life. In 1906, however, Emma Beard, a Smith College graduate and former settlement house worker, became a director and was instrumental in redefining the relationship between the elegant arts and the contemporary world. The Coterie's educational efforts shifted to the concerns of the Progressive Era. Court systems, public schools, child labor questions, labor unions, pure food legislation, public libraries, immigration, and women's suffrage altered the club's predilection for more abstract notions of culture. In the course of this change, the members' notion of "mutual improvement" expanded to include those outside their club and their community. Their educational activities often found expression in some form of public action such as writing letters to legislators, holding community forums, canvassing for support of TB clinics, linking with national organizations such as the General Federation of Women's Clubs, or sending representatives to

serve on community committees like the Community Health Board. In response to this added dimension of club life, the Coterie created the office of Corresponding Secretary to handle the quantity of letters it produced.

Coterie life continued to intersect with the major public events of the 1900's through the 1950's: the Suffrage Movement, World War I, the Depression, World War II, and the post-war era with its perceived threat of communism. For example, in 1914, while giving half of their program to an examination of the culture and resources of Argentina, Brazil, and Chili, the members decided to devote the other half of their study time to topics such as the World Peace Movement, air machines in war, the wireless, and the Triple Alliance. The next year, 1915, the club continued with its South American study, juxtaposing it with discussion of the modern housekeeper, Billy Sunday, suffrage, the trenches, women in the war, submarines, munitions of war, and the Kaiser. In 1918, pressed by war-time demands, the Coterie considered discontinuing for the duration of the war. They voted not to but did drastically reduce the number of meetings for that year.

"The regular meetings of a group like ours," wrote Harriet Knapp (a secretary during World War II) "can enrich the lives of the members through the inspiration of pleasant companionship, through the thought and care expended on the programs, and through our search for high ideals in the lives and work of those whom we study. Thus in Coterie we are building stepping stones to the Future." (CM Oct. 13, 1942) In the annual report for the same year, she commented that "the daily necessity has been particularly obvious in this year of war, but the elegant arts have not been forgotten....We can close the year feeling that each Coterie day has brought us new ideas as well as an hour of pleasant relaxation." (CM May 25, 1943) That year, they had had a symposium on what the post-war world would be like and learned about the mobilization of volunteers for the Civilian Defense Organization. They had also given a short period to each member to talk about her hobbies and had listened spellbound to a member's talk on "How Does Your Garden Grow" in which she used crayon and paper to illustrate the division of chromosomes in the production of new cells.

Conclusion

This research suggests that the Coterie's educational work enabled the members to pursue interests in the liberal arts (in the opinion of some, only decorative educational work [Ely, 1948]) and to gain an understanding of the major social events of their times. Rather than separating the elegant arts and the coarser plants of daily necessity, the Coterie used its study club to integrate them and become active in them. As a nonformal study club operating independently of an organized adult education program, the breadth of its study and its longevity are quite amazing. If adult educators became more familiar with these aspects of women's study clubs alone, the field would have a more complete notion of how adult education has operated in the United States.

However, feminist scholars point out that educators need to consider the role of gender in the making and writing of educational history. (See for example, Legemann, 1983; Solomon, 1985) How does being a woman (not in the biological sense, but in the socially constructed sense of "woman") affect what, where, why, and how one learns?

Ellen Lagemann (1979), in a study of the lives of five prominent progressive female reformers, analyzed the role and style of education in their lives. Education was, she suggests, "part of what defined what they could and could not do." (p. 4) She makes a case for the influence of female colleagues and what she terms "sororal education," that is, for the process of women teaching women. Among her five women, she found that "joint interest, daily contact, and a propensity to trust other women contributed to the pronounced educative influence of female colleagues..." (p. 153) When Lagemann compared the adult education, vocational education, and childhood education of the women she studied, "all had far more to do with the provisioning of interpersonal orientations than with the development of specific substantive knowledge." (p. 160)

In addition, most of the women gained their most significant education from people they met "outside institutions primarily designed to educate." People and their concerns were "the central curriculum of their education."

These qualities of sororal education -- interpersonal orientation, affiliation, autonomy from institutionalized education, common interests, and an emphasis on people -- describe much of the educational style of the Coterie. The secretary's 1950-51 annual report to the membership gathered for lunch at the final meeting of the season echoes these qualities:

Perhaps it is the person first and subject matter second that makes our Coterie program such a rich experience for all of us. Surely no annual report should omit the fellowship that is the background for all our endeavors in Coterie. Under the direction of Miss Adcock and Mrs. Hemel we have enjoyed a program most satisfying to the intellectual and spiritual and with a luncheon at the beginning and the end...to feed the physical, we emerge from this year well fed indeed. (CM May 8, 1951)

Future research needs to delve further into what happens when women teach women and the elegant arts mingle with the coarser plants of daily necessity.

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HOW DO YOU KNOW? MICHAEL POLANYI AND ADULT EDUCATION

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Abstract Michael Polanyi's heuristic philosophy provides a powerful justification for the very existence of adult education, as well as a useful tool for critiquing adult education practice and the assumptions that inform that practice.

Methodology This study consists of a reading of the major works of Polanyi and selected works in the theory and practice of adult education, especially in the United States. I attempt to explicate the major elements of Polanyi's epistemology and ontology, and I have examined some of the educational, political, and ethical implications of Polanyi's thought, especially as they shed light on the modern practice of adult education.

Discussion Michael Polanyi's professional interest in philosophy, particularly epistemology, grew from his practice as a chemist and his recognition that what he and other scientists did--the mental acts they performed--in the course of their professional work was totally inconsistent with the popular view of how scientists do science--a view informed by objectivist philosophies like logical positivism. Both theory and method within this objectivist paradigm are fiercely empiricist. A scientific appeal or argument was an argument based totally on the empirical data. An argument based on the interpretation of data, rather than simply the data, was ipso facto unscientific or prescientific. And any theory, given this empiricist view, would be quickly rejected by the scientific community if new data should be discovered that refuted the theory. Science was set apart from other activities of the human mind as being value-free, independent of and immune from the exercise of human judgment with its possibility of human error. Science was objective, not subjective.

But Polanyi's own scientific career was full of every variety of subjective emotion, including curiosity, exhilaration, frustration, anxiety, and an intense persuasive passion or need to convince others of the correctness of his own interpretation of the phenomena he observed. Furthermore, he saw these same subjective passions in all his fellow scientists and throughout the literature of science. And he saw scientists holding tenaciously to theories despite numerous anomalies. Everything he saw in the practice of real science, as opposed to the objectivist science of the popular conception, pointed to what he came to call the ubiquitous personal coefficient in all knowledge (Polanyi, 1962; Grene, 1969).

A decisive clue to understanding the structure of this personal coefficient in knowledge came to Polanyi from the Gestalt psychologists. Polanyi modified the Gestalt model, calling the resulting model tacit knowledge. And he asserted that all knowledge is either tacit knowledge or is rooted in tacit knowledge (Polanyi, 1962; 1966; Polanyi & Prosch, 1975).

At first glance, the structure of tacit knowledge appears to be dyadic, because the essential structure is a from-to structure. Every time we make contact with reality, we use something to make that contact. At the most

basic level, our own bodies are the instruments with which we engage the external reality around us. Polanyi calls the instrument, or the array of instruments, that we use in knowing the world around us the proximate term. It is, as its name suggests, the closer element to us, and we use it to make contact with the distal term, that which we seek to understand (Polanyi, 1966).

The proximate term is literally a tool for knowing. In fact, we may even think of an actual tool as an illustration. One of Polanyi's frequent examples is that of using a hammer to pound a nail. If we have a modicum of skill and experience in using the hammer, we can successfully drive a nail with it. When we swing the hammer at the head of the nail and strike the nail, we feel the energy of the impact not at the head of the hammer but back at the handle where we grip the hammer. Yet, our attention is focused on the head of the nail, and we understand the impact in our hand in terms of the meaning of the impact of the hammer on the nail. In Polanyian terms, we attend focally to the blow of the hammer's head on the nail and subsidiarily to the impact in our hand. By directing our attention in this way we indwell the hammer, or pour ourselves into it. In a real sense, we and the hammer become one. In the same sense, we ourselves are extended to the head of the hammer, and we ourselves are striking the head of the nail.

It may already be apparent that the structure of tacit knowledge is triadic, not dyadic. Already a third element is clearly present, providing the dynamic relationship--in fact, creating the dynamic relationship--between the proximal and distal terms, attending focally to the distal term while attending subsidiarily to the proximate term. This third element is the mind of the knower. Our essential role as knowers is demonstrated even at this rudimentary level by our capacity to choose where we direct our attention. The same term may be the proximal term one moment, and, when we shift our attention to it focally a moment later, it then becomes the distal term. Think of the hammer. Before we use it, we are likely to examine it. We want to know that it is appropriate and safe for the task we have in mind. We may heft it several times to sense its weight and balance. We may examine both the head and the handle visually and tactilely. We may study the shape of the peen, we may notice the name of the manufacturer. We may even admire the esthetic qualities of the hammer as an artifact. Then, a moment later, we are using it as a tool, and our attention to it is subsidiary. It is not accurate to say that we are unaware of the hammer at this point. If we were unaware, we could not hold on to it or use it at all. We must be aware of it in order to use it. But, on the other hand, we cannot be focally aware of the hammer and use it then either. Once we shift our focal attention back to the hammer as an object of focal interest, we destroy its utility as a tool. It becomes once again an external object, not an integral part of our repertoire for engaging external objects (Polanyi, 1966).

This illustration of tacit knowledge has used a tangible object, a hammer, as an illustration of the proximate term. Most instances of tacit knowledge, however, entail intangible entities as proximate terms. In the hammer illustration, we dwell in a good deal more than simply the hammer. Our operation in that case is informed by a reservoir of experience with hammers, nails, lumber, design and construction techniques, and an immense array of unspecified--and unspecifiable--knowledge about our own bodies that makes

possible the intelligent coordination of a great multitude of muscular and neurological processes. This entire repertoire, not just the hammer, constitutes our enabling tool for the performance of this complex task.

Polanyi's theory of tacit knowledge sheds significant light on adult educational theory. First, and perhaps most significant for the individual learner, it provides a firm epistemological buttress for the assumption that the learners themselves are the essential hub around which adult education must be built, and it affirms the vital role thought to be played by the learners' experience in adult education. If the tacit knowledge that comprises the learners' experience is indeed the probe with which they encounter and understand the reality now before them, then an educational program that discounts or disregards that experience cripples itself by failing to use a vital resource. And if the program does not recognize the necessary role of the learners in the design of the learning and the necessity of their affirmative participation in the learning, then it shuts down the dynamic element that is responsible for the formation of meaning. Without the active, affirmative participation of the adult learners, the process of adult education is reduced to a meaningless, atomized mass of data.

It is clear that Polanyi's epistemology is grounds for the rejection of behaviorist assumptions about adult education, since Polanyi has explicitly attacked the behaviorist position at its objectivist roots. It may be less clear that Polanyi's position constitutes also a caution against too optimistic a view of the value of liberal education, at the same time that it provides an epistemological rationale for the necessity of liberal learning. Everett Dean Martin (1926) offers the traditional justification for a liberal education: it liberates the learner from the bounds of narrow parochialism by opening up the vista of the best that has been thought across the time and space of civilization so far as we are able to know that civilization. And Martin would have the learner incorporate--indwell, we could say--that learning, using it to engage more intelligently the reality of the here and now. But I believe for Martin, and certainly Polanyi, the key is in the indwelling. The structure of tacit knowledge proclaims that a specific, focal concentration on the classics of our civilization destroys the utility of that vast information as a tool for encountering reality, just as a specific, focal attending to the hammer destroys the hammer's usefulness as a tool.

Those who emphasize the value of liberal studies for adult education do not necessarily agree about the appropriate role of the learner in the selection of the educational agenda and in the learning process itself. One school, most clearly represented by Lawson and Paterson, argues for a program that is teacher-centered and content-based. This school of thought believes that the teacher, an expert in a given content area, abdicates responsibility if the program calls for significant learner participation in the planning and selection of content and for a teaching methodology with extensive learner discussion. In particular, Lawson questions how a group of students can be competent to plan a course of study for themselves in a subject-matter area where they have only limited expertise. This question is a particular aspect of the more general question that Plato wrestled with in the Meno: how can we ever cross the gap from ignorance to knowledge without the helping hand of someone who has already gone ahead and can now show us the way?

Polanyi's answer again lies in the structure of tacit knowledge. At the level of an individual perception, we integrate the data, which are in themselves incoherent, into a coherent, meaningful pattern, and the meaning emerges. This emergence is ubiquitous. All knowing emerges in this way, rewarding our struggle to find the meaning in the data. When we achieve a new understanding of our external world, this understanding is in turn incorporated into the apparatus with which we see the world, and the structure of the tacit knowledge with which we probe our world is altered. In turn, this altered probe will provide yet another newly refined and modified understanding of the world. Hence, Polanyi argues, truth is not a precise, fixed, determinate thing, but something with infinitely expanding implications pointing the way to still other new truths that are now only dimly foreshadowed. And an understanding is not something that comes in a discrete package, something that we either have or don't have. Our understanding of something emerges and grows continuously through the constant exploring that we ourselves undertake. This Polanyian view does not preclude the assistance or guidance of one who can serve as a mentor or teacher. In fact, for mastering certain complex, tacit skills, a mentoring or modeling relationship may be nearly essential. But Polanyi's epistemology emphatically refutes the argument that adult learners cannot play a major role in planning and carrying out their learning agenda (1962).

If we shift our perspective from the microcosm of the individual learner or the individual learning group to the macrocosm of adult education in general, and adult education in the context of the wider environment, we find that Michael Polanyi's philosophy provides a powerful justification for adult education, or lifelong learning. Sixty years ago Eduard Lindeman (1926) argued that education is not preparation for life. Rather, it is life. And life, he said, is education. Polanyi's epistemology and the ontology that parallels his epistemology provide the rigorous, consistent philosophical structure that Lindeman might have attempted himself.

Polanyi thought of his philosophy as a heuristic philosophy, and he often referred to it in these terms. Polanyi's terminology says a great deal about the general character of his assumptions about people, knowledge, and the world. Polanyi saw all sentient existence as characterized by a heuristic impulse. Even at the level of the amoeba, Polanyi found a center of awareness intent upon exploring its world. He studied the literature of animal behavior extensively, especially the work of Kohler. The laboratory animal experiments of the behaviorists were of special interest to him, and he re-analyzed the results of the classical studies of Pavlov and Skinner, arguing that his own interpretation, rather than the original behaviorist interpretation, offered a more realistic and more satisfactory understanding of the data. Where the behaviorists had seen conditioning, Polanyi saw intelligent learning, even in life forms as primitive as worms, whose laboratory behavior he found could not be explained simply as conditioning. And in the data from Skinner's rats and Pavlov's dogs, Polanyi found mental integrations far more sophisticated than stimulus-response or operant conditioning patterns (1962).

Proceeding up the evolutionary ladder to species of increasing intellectual complexity and capacity, Polanyi finds the heuristic impulse growing apace, until, flowering into an articulate framework of language at the level of human intelligence, the impulse becomes a passion that motivates and focuses

sustained intellectual striving that for many people informs entire professional careers and comes to be shared and transmitted by communities of like-minded explorers.

At this point, Polanyi's epistemology has radiated implications that touch on profound ontological issues. If our knowing is indeed this kind of emergent, evolutionary process energized by a heuristic drive that is so basic to sentient life that we can identify it across a wide panorama of animate existence, then Lindeman's equation of life and education is no sentimental hyperbole, but a momentous truth. And if it is true, justifications of adult education on instrumental grounds, or political grounds, or esthetic grounds, or any other grounds, while they may be useful and true in particular situations, remain secondary to the ultimate, bedrock justification of adult education, which is that it is as essential a part of life as eating and procreation.

Polanyi postulates an ontology of emergence that parallels his epistemology of emergence. Human existence cannot be reduced to the laws of chemistry and physics, though it is dependent on those laws. Any organized system--a watch, say--is subject to the chemical and physical laws that determine the essential composition of its parts. But those laws cannot explain a watch, which owes its essential nature to a higher stratum of meaning. This higher stratum defines the boundary conditions that are left unresolved by the laws of chemistry and physics. It entails laws of engineering design and useful purpose, and it is necessary to understand the watch at this level in order to understand "watchness." Hence, any machine imposes a layer of boundary conditions upon the more basic stratum of physical and chemical constraints. Likewise, a botanical specimen has within its nature not only physical and chemical aspects but mechanical or machine-like aspects as well. However, a botanical specimen cannot be understood simply in mechanical, chemical, or physical terms. If we could totally specify all these features of our specimen, we would still not know the specimen, because we would not know its essential biological nature, which is the highest stratum of its existence and is left open by the lower strata. We can continue to follow the strata to higher levels, moving to the animate creatures, to increasing levels of intelligence, and then to humanity.

With the creation of language, Polanyi argues, yet another stratum emerged, a stratum of existence that transcends the individual human organism. This is a community of knowers and seekers of truth, a sphere of existence that, borrowing the language and the analysis of Teilhard de Chardin, Polanyi characterizes as the noosphere. Like all the other emergent strata, the noosphere is dependent on the strata below it. Of the noosphere, Polanyi says:

This is the point at which the theory of evolution finally bursts through the bounds of natural science and becomes entirely an affirmation of man's ultimate aims. For the emergent noosphere is wholly determined as that which we believe to be true and right; it is the external pole of our commitments, the service of which is our freedom. It defines a free society as a fellowship

fostering truth and respecting the right. It comprises everything in which we may be totally mistaken. (1962, 404)

This is also the point at which the learner-centered philosophy of adult education, that which is characterized by Martin's liberalism, Lindeman's progressivism, and Knowles' andragogy, clearly demonstrates its own external pole: a commitment to a democratic community of learners who, in Polanyi's words, "seek the truth and declare it to all comers."

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A CITATION ANALYSIS OF *ADULT EDUCATION QUARTERLY* 1971-1986

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Abstract : The articles published in *Adult Education Quarterly* were examined to determine proportions of citation to studies of an explicitly adult education nature as opposed to studies from another focus. Patterns found in these proportions suggest an increasing reliance on previous adult education studies as basis for more recent research in the field. These findings support the notion of emergence of an adult education discipline.

Problem : Adult education has long been described as an emerging discipline but there has been little empirical study of its emergence. This study was an attempt to quantitatively assess emergence by investigating the changing nature of citations in research literature of the field.

Knowledge is the quintessential element in all disciplines. Adult education as a relatively new field of study has had to rely on knowledge obtained from more established disciplines. However, to what extent the field has shaken this fledgling status, won over practitioners from their original intellectual alignments, and created unique knowledge of its own is not clear.

Studies cited in another's work are an observable indicator of influence one author's work has on the work of others. The degree to which studies concerned with phenomena of the field are referenced in current research is an indicator of the importance with which unique knowledge about adult education is held. Evidence that relatively increased use is being made of this knowledge would support an argument concerning emergence of a discipline.

Methodology : The concepts used in scholarly literature are identifiable both in text and through citation. In this study citation analysis was designed to identify cited authors writing from an adult education context, rather than examining and documenting each citation on the merits of its own particular context.

Classification of authors was achieved through searching the cited title and publication information for an explicit reference to an adult education context, then attributing to the author the item's classification. Two categories of cited studies were designated, those by authors of adult education research, deemed 'primary literature', and those by authors who are not identified with an adult education context, deemed 'secondary literature'.

Adult education materials have previously been the subject of a single published citation analysis where *Adult Education Quarterly* (1968-1977) was analyzed by Boshier and Pickard (1979). They attempted to establish the number and percentage of "primary literature citations", the impact of individual scholars, and the impact of individual items by most frequent citation. "Primary Literature" was defined as studies whose concepts, processes, and data are clearly identified with adult education.

Using a panel of judges their study designated citations only when seven of nine expert judges agreed. Their results led them to conclude researchers publishing in the *Journal* were increasingly citing "primary literature", and this fact demonstrated that the field is creating its own body of knowledge.

The current study follows on Boshier and Pickard (1979) in order both to verify this result as a continuing trend, and to confirm the type of conclusion formed through alternate research procedures. The studies differ in that Boshier and Pickard analyzed the most frequently cited individual items and authors, whereas in this study the focus was on the proportional size of the author categories present.

The study population consisted of the citations in articles published in *Adult Education Quarterly*. The most recent sixteen year period (1971 to 1986) was studied because of a shift in the *Journal's* editorial policy in 1966 when the 'research and theory' emphasis was proclaimed.

Data collection included the citations from all articles and the 'forum' section of the *Journal*. Excluded were citations in languages other than French or English, personal communications, non-retrievable sources and citations without named authors. Because this was an investigation of influence of category of citation upon another's work, self-citations were eliminated.

To assist the researcher in designating citations as 'primary literature' a list of terminology referring to adult education contexts was compiled. If one or more of the terms used in the title of the citation appeared on the list or a variant of a term was found (e.g., continued, continuing, continuous) the 'primary literature' designation was automatic.

Once designated, the citation's code was recorded beside the author named for the cited material. In the event that an author was coded as one category and in subsequent material was coded differently, the 'primary literature' designation took precedence. It was assumed that an author who wrote on an adult education context was an "author of primary literature" irrespective of the title of any other works cited in the *Journal*.

By linking the classification process to authors, the accumulated number of authorships and co-authorships of the most frequently cited authors were more accurately assessed, while proportions in the categories present reflected the presence of "authors of primary literature" and "authors of secondary literature" at all points in time.

Reliability measures were performed to assess the consistency and appropriateness of the collection and analysis procedures of this study. Errors of inconsistency were detected by measuring stability-over-time in a sample of materials analyzed at two points. Recoding 316 authors resulted in 97 percent consistency between the first and second codings. Errors of disagreement were evaluated by an independent judge coding a sample and comparing the result to the original research finding. Results showed 91 percent agreement between the independent judge and the original rule-based classification for 135 authors examined (123 agreements).

The validity of the rule-based classification system used in this study was examined by consulting a panel of experts from the field. Eleven independent experts from university settings of adult education were asked to establish a standard by coding the 20 most frequently cited authors from each period under study. Finding of 75.5 percent agreement resulted when the judgement of at least ten of eleven experts (over 90 percent) were compared with the rule-based classifications used in the research study. When only a majority of experts (six of eleven) establish the standard of comparison the study's classifications agree for 90.6 percent of the 53 authors involved.

Results : A total of 5,413 citations were contained in 249 articles in the study period. Of these citations 713 were excluded, leaving 4,700 citations to be classified. This represented 3,381 individual authors; however, only 269 (7.9 percent) of these authors are cited an equivalent of twice. Almost one third of the citations were to 381 individual journals; however, only 12 journals (3.1 percent) were cited at least 10 times during the study period.

The proportion of citations to "authors of primary literature" accounted for one third of citations in Volume 21 increasing to almost two thirds of the citations by Volume 36. When data is consolidated into two 8-volume periods the comparison shows an increased citing of "authors of primary literature" from 41.6 to 46.4 percent. Minimally, it can be said that a 4.8 percent rise has occurred between the first half (1971-1978) and last half (1979-1986) of the study period.

The 20 most frequently cited authors in the first and last half under study show a similar pattern. "Authors of primary literature" constituted 81 percent of the most cited authors and 76.9 percent of citations by this group in the initial 8-volumes, while these most cited authors were 85.7 percent "authors of primary literature" and accounted for 90.3 percent of citations in the latter 8-volumes examined.

Citations to journals deemed 'primary literature' journals accounted for between one tenth of journal citations in Volume 21 to over one half of the journal citations in Volume 36. As with the "authors of primary literature" 'primary literature' journals were increasingly cited when comparing the first and the last half of the study period. During 1971-1978 about 32 percent of journal citations were deemed 'primary literature', whereas, by 1979-1986 almost 40 percent of journal citations were to the 'primary literature' journals.

The most frequently cited journals (cited 10 or more times) in 1971-1978 amounted to only 9 journals of which 3 were 'primary literature' journals. These journals accounted for 192 of 271 citations (70.8 percent), while during the 1979-1986 period the 'primary literature' journals amounted to 5 of the 9 journals present, and accounted for 287 of the 338 citations made to journals (84.9 percent).

Implications : Results suggest that authors using *Adult Education Quarterly* as a communication channel for their research reports are paying increased attention to previous adult education studies, and, therefore, are building their own studies on a foundation of unique and tested knowledge about the field.

Other explanations are possible for the above trends, one alternative view would be that editors may choose to publish articles that tend to cite the *Journal* more often than articles that do not. Similarly, it could be suggested that authors who publish in a particular journal may have something in common that is not readily observable, and may cite each other's work as a matter of familiarity, thereby driving up citation rates.

To assess the impact of the above arguments on the results obtained in this investigation an analysis was made of the proportion of citations in *Adult Education Quarterly* to other articles from *Adult Education Quarterly*. Data was obtained for Volumes 1 to 35, aggregated by 5-volume intervals. By plotting this data for each time frame and comparing proportions it was possible to determine whether an increasing citation rate to "authors of primary literature" was due to an 'incestuousness' within articles published in *Adult Education Quarterly*.

The resulting 7 sequential proportions were : .07, .04, .06, .03, .06, .05, and .06. As can be seen the proportions of citation to the *Journal* have not increased over time, lending support to an argument that any rise in citing behavior to adult education research is not simply a product of colleague familiarity on the part of the researchers publishing in the *Journal*.

Conclusion : The implication of the Boshier and Pickard (1979) study along with the current study's confirming result suggests a need to look in more depth at the cited materials in adult education research. Both studies have obtained results suggesting a new quality of citation in the field, yet neither study identified this presence by analytic terms other than growth. Future study should expand the dichotomous categories used in past efforts in order to identify more precisely the values in citing to 'primary literature'.

Reference : Boshier, R. & Pickard, L. (1979). 'Citation Patterns of Articles Published in *Adult Education* 1968-1977.' *Adult Education*, 30(1), 34-51.

UNDERSTANDING REALITIES OF PLANNING RESEARCH: BEGINNING RESEARCHERS PERSPECTIVES AND APPROACHES

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Abstract

This paper identifies and describes factors important to beginning researchers in the planning stage of research, in the Adult and Continuing Education program at Washington State University. The Myers-Briggs Type Indicator (MBTI) was used to attempt to explain the different approaches found in planning research. Implications of this study for dealing with preferred styles of inquiry are suggested for graduate student research advisors and instructors of research methods.

Statement of the Problem

Most educators agree that one of the most critical tasks for professors of adult education is the training of competent researchers for the field. The accepted approach to achieve this goal is to engage each graduate student in a comprehensive research project as a major requirement for a graduate degree. Much has been written to assist instruction of the research process. However, little information is available to help us understand the perspectives of beginning researchers and how they approach their first major research effort.

The purpose of this study was to better understand beginning researchers' planning phase of research (those activities and events leading up to the actual conduct of research). Understanding this phase involves analyzing how internal factors such as personal understandings, interests, emotions, goals and preferences affect the beginning researcher's approach to research. Predictable external factors such as time, money, and expertise needed as well as political factors such as expectations of the program and advisor, and implications for future employment, also affect the planning of research. Together, these factors form a framework for what is researched and how the research is carried out by the student. One tool to help us better understand these internal factors and their relationship to external factors in the planning phase is the Myers-Briggs Type Indicator (MBTI). The MBTI documents preferences which structure the individual's personality and helps point out the similarities and differences in the way beginning researchers perceive the research project and make judgments based on their perceptions.

Methodology

The study was based on the naturalistic paradigm for research characterized by its concern with human behavior and its emphasis on natural settings. An in-depth analysis of beginning researchers enrolled in the Adult and Continuing (ACE) program at Washington State University was conducted during

the planning phase of their thesis research. Data were collected with this group starting at the beginning of their formal coursework, a period of about six months. The research setting included sites both in and outside the classroom and utilized co-investigators. Data were collected through formal (in-depth ethnographic), and informal interviews, observations and document analysis. Persistent observation of the sites, triangulation of methods, member checks of the research design and results, peer debriefing, and thick (full or dense) descriptions were techniques utilized to ensure trustworthiness of the study. An audit trail maintained by the researcher was inspected by an external auditor to assess the credibility of the research processes. Participant perspectives of the planning phase of research were identified and described and tentative hypotheses were developed based on the Myers-Briggs type Indicator.

Description of Data

This section presents and analyzes the data collected in the course of the study. To do justice to a great amount of data that are in the form of observational and interview notes, documents and records, data were condensed into the following categories which were generated from the data themselves. This method was used in order to best portray the depth and emotions of the information the respondents offered. In addition, use of the MBTI Indices provides a framework to illustrate how these categories can be used by instructors of research methods and advisors to understand individual preferences and approaches to planning research.

The process of planning research for students in the Adult and Continuing Education program at Washington State University involves a complex set of elements. The themes listed below are based on the subjects studied and are similar to themes listed by Barr (1984).

The Research Environment

First, an understanding of the research environment in which beginning researchers are operating sets the stage for understanding more specific factors identified as influential during the planning phase of research. The following are important elements influencing the overall research environment in a department:

1. student relations with the faculty
2. a sense of community with the department
3. faculty attention to and concern for teaching
4. procedures and philosophy related to evaluation of student performance
5. rigidity and/or flexibility of formal curricular requirements.

The following are specific factors identified as influential during the planning phase of research which includes activities and events undertaken that bring the researcher up to the point of conducting the research.

Program Structure

The structure of the program includes phases of the student's program such as learning policies and procedures, completing major coursework before attempting the research project, understanding thesis requirements, and learning research methods and techniques accepted and used by the program or field.

These phases were found to influence the development of the ACE student both personally and professionally. Students beginning the program have the task of gaining broad-based knowledge of the field of adult education and of the program in particular. Enrolling in a research methods class and planning one's research represents a culmination of a developmental process whereby of the student clarifies and developing his/her own ideas and interests and forms them into a workable research topic. This process can be viewed as basically the same as career development; most students were pursuing a topic with specific applications to a particular job or situation where one could develop a career. Sources of stress found during this time included:

1. concern about the coursework itself
2. insufficient orientations to the program and field of adult education
3. lack of knowledge of research methods or subject knowledge
4. concern about doing a "good" job within the time and money involved
5. self-doubt about being able to conduct research
6. lack of understanding about own strengths and weaknesses
7. not knowing what will "fit" the program and class
8. concern with focusing and narrowing in on a specific topic, and
9. worries about being able to manage this stress and an intensive project.

Topic Selection

The process of selecting a research topic was seen as a stressful experience by most of the ACE students. Factors found to be influential on topic selection included:

1. lack of time
2. lack of financial resources
3. lack of experience and expertise
4. anxiety in moving from a safe, short-range project to a more comprehensive research topic.
5. the amount of independence students have or desire in selecting a topic of their choice.
7. relationship between the researcher and the research problem.
8. scope of the topic
9. length of time necessary to complete the project.
10. personal and social values
11. applicability of the project to specific programming or other types of problems.

Selection of the Advisor and Committee

The selection of advisors and committees was seen by beginning as a complex, anxiety-producing experience. Advisors were seen as taking on different potential roles as either nurturing types or critics and competitors.

Conflicts can emerge when there are discrepancies between the roles assumed by the advisor/committee and what is wanted by the student. The students tended to look for an advisor who could provide professional expertise in a subject area and be a personal supporter of the student.

Personality variables also were seen as sources of conflict. Some of these variables included:

1. levels of independence and dependence between advisor and student,
2. how supportive a relationship was and
3. differences in how each perceives the methodology of gaining this new knowledge.

Students chose advisors and committees based on a good "fit" between personal ideals, roles and goals, personalities, accessibility of the advisor and the way the student was treated (i.e., as a colleague).

Learning and Personal Development

Development of the student during graduate education entails both cognitive and psychological aspects. Understanding how an individual functions; or how events are perceived, how information is processed and how decisions are made, can be used to help understand how an individual approaches the research project. The following section illustrates how the Myers-Briggs Type Indicator (MBTI), measuring both cognitive and affective aspects, was used to help develop hypotheses on how to deal with different approaches to planning research. A detailed explanation of the MBTI is beyond the scope of this paper. However, a brief interpretation of the MBTI matrix is offered. A more detailed description of the four dimensions (E/I, S/N, T/F, and J/P) and their conceptual base may be found in Keirsey and Bates (1978), and Myers (1962).

Psychological Type and Preferred Approaches to Inquiry

MBTI Indices

The Myers-Briggs Type Indicator is based on Carl Jung's theory of psychological types which represent different modes of adapting to the world.

The Four Functions

- S Sensing - would rather work with known facts than look for possibilities and relationships.
- T Thinking - judgments are based more on impersonal analysis and logic than on personal values.
- N Intuition - relates more easily to the inner world of ideas than to the outer world of people and things.
- F Feeling - judgments are based more on personal values than on impersonal analysis and logic.

The Four Attitudes

- E - Extraversion - relates more easily to the outer world of people and things than to the inner world of ideas.
- I - Introversion - relates more easily to the inner world of ideas than to

the outer world of people and things.

- J - Judging - prefers a planned, decided, orderly way of life better than a flexible, spontaneous way.
- P - Perceptive - prefers a flexible, spontaneous way of life better than a planned, decided, orderly way.

Source: McCaulley, Mary H. Center for applications of Psychological Type, adapted in part from the Manual of the Myers-Briggs Type Indicator, 1962

Numerous applications of the MBTI have been made in different fields of study. For the purposes of this study, the author was interested in analyzing how different styles of perception (sensing and intuition) and judgment (thinking and feeling) affect the beginning researcher's planning phase of research. One way to classify approaches to research is suggested by Mitroff and Kilmann (1976) and is described as follows.

Two dimensions of the Jungian types or personality systems important to classifying approaches to research according to Mitroff and Kilmann (1976) are: 1. the informational dimension - (perception) - the individual's preference for data sought from the external or inner world either through their preferred style of sensing (S), or intuition (N), and 2. decision-making - (judgment) the choice of decision-making process used on the preferred kind of input data, either through thinking (T) or feeling (F) processes.

Results

This study found students ranging in all four personality types. There were slightly more who preferred Sensing-Thinking styles over Intuition-Thinking styles. Only one was found in the Intuition-Feeling type. Most of the S-T's came from technical or scientific backgrounds such as nutrition and economics. These same types chose research projects that they termed "realistic", "limited in scope", "logical", and were a "prerequisite for a career change".

The intuitive types were fewer in number and mentioned the "processes" and "meaning" of attempting research more often. Meaningful research, useful for others and finding relationships between diverse topics were some other descriptors used. The backgrounds of the intuitive types were predominately from the social science fields.

Factors identified as important to beginning researchers approaching their first major research project fell into the broad categories of 1. Influence of the program or field 2. Topic selection considerations 3. Selection of the advisor/committee and 3. Personal development and learning. These categories parallel those found in the limited literature on this subject; mostly of doctoral studies in other fields other than adult education. Results of the Myers-Briggs Type Indicator yielded a variety of personality types representing the diversity of the field of adult education. Implications of understanding these results for graduate student advisors and instructors of research methods are many and include the following:

Teaching style - matching teaching strategies to instructor and students' styles will help the students become more confident in themselves and better able to learn research strategies within a complex, stressful time.

Learner Responsibilities - when learners identify their best learning style and activities, learning becomes a shared responsibility. Knowing about one's predicted obstacles or reactions to research situations while planning research will afford the student the most efficient and least stressful experience.

Research Methods - understanding one's preferred way of providing for data in put and process, one's assumptions and beliefs, interests and emotion benefits the student in the planning phase of research. Being prepared for the research cycle and environment should help reduce predicted anxieties that accompany it. Deciding on the methodology to use in accord with one's preferences and interests should assure the successful completion of the project.

Advising - choosing one's advisor and research committee requires a good fit between personalities, goals and learning styles.

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THE USE OF A DELPHI TECHNIQUE IN THE FORECASTING OF ADULT LEARNER TRENDS IN HIGHER EDUCATION

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Abstract: The Delphi Technique was used to collect data from institutional administrators for the purpose of forecasting trends in adult enrollment in Oklahoma higher education institutions in the next twenty years. Predictions were also made regarding institutional changes that may be expected to occur related to these trends.

Colleges and universities are becoming increasingly concerned with helping their students have satisfying educational experiences. Part of this concern stems from the growing number of older students who are attracted to the campus. These new students are not content, as the younger students have been, to accept undesirable conditions that are incidental to learning. They refuse to waste their time and are demanding improved and more efficient services.

Faced with declining enrollment of 18-24 year old students (1), the academic community can also expect possible reduction of faculty and staff, plus loss of revenue for operations. Retention of older students and development of alternative programs offers a possible means to minimize the impact of these changes in higher education.

Success of the older student in higher education will probably be dependent on administrative awareness of adult learning styles and the willingness of the institution to respond to their needs. Survival of the institution may be determined by the same conditions.

Strategic planning in Oklahoma colleges and universities will need to include consideration for possible effects of older students in the student population. It is important to know what expectations these institutional administrators have regarding the effects older students will have on their operations. It is even more important to know whether administrators have an understanding of the special characteristics of the adult learner, and whether the academic environment is being designed to maximize the potential of these students.

It is expected that data gathered from this study will aid in preparing all institutional personnel for any modifications of policy, procedures, instruction, and/or student services that seem advisable. It will be especially useful for

those functions for which retrenchment is indicated, and will allow affected personnel time to begin retraining for other purposes.

The purpose of this study was to identify adult enrollment trends in higher education within the next 20 years as perceived by Oklahoma college and university administrators, and to examine changes that are expected to occur in these institutions as providers for adult learners. Adults, for purposes of this study, were defined as individuals over 30 years of age.

The problem for this study was to answer two major questions: 1) What adult enrollment trends do college and university administrators expect to occur in higher education in the next 20 years? 2) What changes, if any, may be expected to occur in higher education institutions as providers for adult learners in the next 20 years?

For this study, college and university administrators in the State of Oklahoma were considered to be individuals with special expertise and knowledge about adult learners in higher education. Specifically, the Dean of Students and the Director of Continuing Education at each public and private two- and four-year institution and at each comprehensive university were identified as the administrators who not only are most knowledgeable about adult students, but also are most directly involved in development of policy and procedures affecting these students.

The Dean of Students at most higher education institutions is responsible for student welfare, student services, personal counseling, and extracurricular activities designed to contribute to the successful adjustment of the student on campus. The Director of Continuing Education serves the nontraditional student through unconventional programs, and is accustomed to providing services based on identified marketable needs. These individuals were determined to be the campus administrators in best positions to be alert to the composition of the student body and to the needs of the adult student population.

Examination of the organizational structure of Oklahoma higher education institutions indicated that a head count enrollment of 1,000 or more was generally required for an institution to employ specialists in student development and continuing education. Therefore, colleges and universities having fewer than 1,000 head count as reported in Oklahoma Higher Education Report for Spring Semester 1983 (4) were not included in the study.

The names and administrative titles of the prospective participants were obtained from the Yearbook of Higher Education (6) and from the respective college catalogs. In institutions not listing specific job positions of Dean of Students and/or Director of Continuing Education, a person holding the position with equivalent title was invited to participate as panelist for the study.

Through the selection process, 30 higher education institutions were identified as fulfilling the established criteria, yielding a population of 60, with two individuals queried at each institution. Data were gathered using the entire population.

The classic Delphi Technique (3) was used to secure opinions of the panelists. This process involves a series of questionnaires sent in three successive

rounds to collect data from the participants. This method allows convergent ideas to be gathered through brainstorming without the necessity of bringing all the participants together in one place.

The first questionnaire asked panelists to list enrollment trends that might be expected to occur among adult learners in higher education institutions in the next 20 years, and what changes, if any, might be expected to occur in higher education institutions as providers for adult learners within that time period.

Responses from the first questionnaire were analyzed and synthesized into 45 items for consideration in the second round of questioning. The second questionnaire requested opinions of the panelists concerning the likelihood of occurrence for the stated events. Second round responses were analyzed and evaluated for agreement/consensus ratings and for relationships among mean, median, and mode.

The Round Three questionnaire provided a summary and consensus status for each item, with median and interquartile range illustrated. Panelists were asked to review the data, change their opinions if they desired, and to comment regarding any changes made. If they maintained a position outside the interquartile range of consensus, they were asked to give reasons. Panelists were advised that questionnaires not returned were considered to be in agreement with group consensus.

A fourth round was carried out in order to feed back comments from Round Three, and to provide panelists an opportunity to respond to statements by other participants in Round Three. Round Four results were analyzed for agreement/consensus and stability ratings.

From a population of 60, 38 panelists returned the first questionnaire, for a response rate of 63%. They generated 107 statements in response to the request for prediction of enrollment trends that might be expected to occur among adult learners in higher education in the next 20 years. In response to the request for predictions of changes that may be expected to occur in higher education institutions in the next 20 years, 165 statements were produced.

The 272 statements from the first round were synthesized into 45 items for consideration in the second round of questioning. The Round Two questionnaire was mailed to the original population of 60 administrators, requesting their predictions of the likelihood of occurrence for the stated events. Forty-four questionnaires were returned, for a response rate of 73%.

The 44 individuals who responded to Round Two were invited to participate in Round Three. Returns were evaluated for agreement/consensus, using an adaptation of the Cochran model (2). Stability of panelist responses were measured using the model developed by Scheibe, Skutsch, and Schofer (5).

Over four rounds of questioning, consensus was reached for all 45 statements. Agreement in regard to the likelihood that the event would occur with any degree of certainty was indicated for 20 of the statements.

Panelists expressed doubt that changes would be made in the physical environment of higher education institutions to accommodate the adult students. This

concern might be related to the high expectations shown by the panel for increased adult part-time enrollment, indicating anticipated low demand for more resident student accommodations.

The administrators involved in the study demonstrated that they were generally alert to the adult educational trends in higher education. Their opinions concerning the likelihood of occurrence for specified events and the comments they made regarding the predictions indicated a knowledge of happenings beyond their own institutional boundaries. They forecasted a continuing increase in adult participation in higher education and an accelerated rate of activity in nontraditional delivery systems; trends that were also indicated in the literature.

They predicted that higher education institutions would adjust to the demands of the new student population through flexibility in scheduling of classes and services, and through simplification of enrollment procedures. Participant comments tended to show opinions that the two-year colleges are responding more rapidly to the adult students than are the four-year institutions.

Panelists expressed strong expectations that electronic delivery systems will have prominent roles in the educational future. They predicted more off-campus opportunities for learning through televised instruction.

The Deans of Students and Directors of Continuing Education included in this study, while not directly responsible for institutional policy and planning, are influential in creating action. The information derived from this study can be useful for educational planners who are concerned with providing a worthwhile and enjoyable educational experience for their students, and are also attentive to the need for successful institutional survival strategies. The following implications for change are indicated:

Adult enrollment in higher education will increase in both credit and noncredit areas during the next 20 years. Institutions should be making preparations for a new clientele through more flexibility in scheduling and programming, and through removal of obstacles to adult involvement in education.

Faculty development and improved communications among the educational community will be of increasing importance in recruiting and retaining the adult student.

Nontraditional delivery systems will attract new adult students and will become of increasing importance to the survival of the institution. Electronic delivery systems will have prominent roles in the educational future. More off-campus opportunities for learning will be available through televised instruction, and education will be more accessible to adults heretofore unreached by colleges and universities. Services such as counseling, advising, and library resources must also be made available to students in remote classrooms, giving them the same advantages as resident students.

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Locus of Control and Values of Adult Learners in Schools of Dentistry, Business and Education

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ABSTRACT

This study investigated the relationship between LOC and Value Orientations of adult learners in graduate schools of Dentistry, Business and Education. The data indicated older adults were more internally oriented. Significant sex, age, and School differences were noted among the top ranked values within each school.

Traditionally oriented faculty often instruct their graduate students in the same way they do their undergraduates. Yet, it is quite clear that these older adult learners returning to universities exhibit marked differences in their value systems and their self-sufficiency and personal control of their lives. Do these differences impact uniquely upon the ways faculty interact with this new breed of adult learners? Should faculty be more attentive to these age differences, self-reliant behaviors and value orientations of graduate students? Should faculty shift their teaching strategies to capitalize on these differences. Answers to these questions are just now being systematically studied.

REVIEW OF LITERATURE

Adult development and adult education literature indicate that as age increases there is a perceived shift in internal self-control and values (Levinson, 1978; Gould, 1978; Knoop, 1981; and Londoner, et. al., 1985, 1986).

Social learning theory (Rotter, 1966; Phares, 1976; Lefcourt, 1982, 1983) is often used to explain personal control and self-reliant behaviors. As an hypothetical construct, it expresses the notion that behaviors are determined simultaneously by the variables of expectancy and reinforcement value. One's Locus of Control (LOC) refers to the belief that the relationship between one's behaviors and the subsequent occurrence of a reinforcement are causally correlated. External control refers to the belief that fate, luck, chance, "the system" or powerful others mediate the causal relationship. Internal control implies the belief that the occurrence of reinforcements are based on one's own behaviors.

Rokeach (1973) pioneered research on value orientations and showed that there are developmental patterns in values as people age. He described two sets of values: terminal or ends-oriented values and instrumental or means-oriented values. The terminal values are the worthy goals one strives for such as "A Comfortable Life," "A World of Peace," "Freedom," etc. Instrumental values are the perceived means or modes of behavior that help to attain these worthy outcomes (e.g., "Ambitious," "Capable," "Intellectual," etc.).

This study is the third in a series of systematic investigations that examine the relationship between LOC and values of adult learners who use higher education for mid-career professional development, career change or re-entry into the work force.

The following research questions guided this study:

1. What are the LOC orientations of graduate adult learners in Schools of Dentistry, Business and Education and do older adult learners display a more internal orientation than younger ones?
2. Do males and females within the three schools display different LOC orientations?
3. What are the value orientations of males and females within the three schools and do the value priorities of older adult learners differ from the younger learners?
4. Do males and females of all ages between the Schools of Dentistry, Business and Education display different value priorities?
5. What relationship exists between sex, age, LOC and values of graduate adult learners within and between the three schools?

METHOD

Students were enrolled in business, dentistry, and education programs at Virginia Commonwealth University in Richmond during the 1983-86 academic years. Subjects ranged in age from 18 years to over 40. There were 212 subjects in the School of Business sample, 164 in the School of Dentistry, and 255 in the School of Education.

Rotter's (1966) Internal-External Locus of Control Scale which consisted of 23 question pairs within a forced-choice format plus six filler questions was used. The I-E Scale has been judged appropriate for use with college educated adult subjects (Lefcourt, 1981).

Rokeach's (1973) Value Survey was the second instrument used and consisted of 18 alphabetically listed terminal and 18 alphabetically listed instrumental values on separate pages. Subjects rank order each list of values according to the relative importance of each value to themselves.

A three part survey comprising demographic data plus the two instruments were given to instructors to distribute to their classes. Part I requested information regarding the subject's age, sex, marital status, work, and major. Part II consisted of Rotter's I-E Scale and Part III included Rokeach's Value Survey (Form D). A 54%, 71.5%, and 50% return rate was obtained from the Schools of Business, Dentistry, and Education, respectively.

RESULTS AND DISCUSSION

The results for questions one and two concerning LOC orientations, age, sex by school are displayed in Table 1. On the Rotter I-E scale the lower the score the more internally oriented a subject is. In most studies a mean score below 8.50 is considered an internal orientation on an I-E scale that runs from 1-23. In this sample older adult graduate students in all three schools generally evidenced descending mean scores. The three-way analysis of variance indicated that older learners, both males and females, in business were more internally oriented than the younger ones. This result also existed for graduate education students. Males in education showed a lower

Table 1. Mean Locus of Control Scores for Age, Sex and School.

	Male					Female					Both Males and Females			
	Business	Dentistry	Education	All Schools		Business	Dentistry	Education	All Schools		Business	Dentistry	Education	All Schools
	N	Mean	N	Mean		N	Mean	N	Mean		N	Mean	N	Mean
Under 23	7	8.14	16	9.00	0	23	8.74				14	9.71	22	9.50
23-29	57	8.18	94	8.46	14	8.21	145	8.34			100	9.17	118	8.81
30-34	30	7.90	11	7.36	13	7.31	54	7.65			51	8.78	18	8.33
35-39	14	7.86	4	11.50	7	8.29	25	8.56			26	8.15	6	10.00
Over 39	13	4.85	0		16	6.94	29	6.00			21	5.86	0	
All Ages	121	7.71	125	8.53	50	7.58	296	8.03			212	8.66	164	8.89

mean LOC score than female education learners. In the School of Dentistry the results were less stable. Males showed descending mean scores as age increased for the first three age groups. The fourth age group (35-39) obtained a mean score of 11.50. It should be noted that there were only four males in this age group. Similarly, for females in the Dental School the mean scores descended as age increased for the first four age groups. Again it should be noted that there were only two females in this age group. The mean score of 7.00 most likely should be disregarded. It is obvious that the Dental School had very few adult learners in the 35-39 age range whereas the School of Education did have a number of persons in this age range. In this regard one should note that there were 43 females in this age range and only

seven males. Also in Business there were 14 males and 25 females ages 35-39. Clearly, the Schools of Business and Education provided more post professional educational opportunities for older adult learners. Moreover, both males and females in the older groups were more internally oriented than their younger counterparts and the males were appreciably more so. These results are consistent with Knoop (1981) and Londoner, Linder and Bauer (1985, 1986). Thus, in this study, within all three schools, as age increased subjects were more internally oriented [$F(4,604) = 273, p < .05$]. Also, males in all three schools were more internally oriented than females [$F(1,604) = 6.70, p < .01$].

Question three addressed the value priorities of adult graduate learners within all three schools and asked whether or not the value priorities of older adult learners differed from the younger ones. Question four asked whether or not the sexes within each school have different value priorities. A two-way ANOVA was computed to determine the within school differences for age, sex and sex X age interactions. For the terminal values within the School of Business "Self-Respect" was ranked first with statistically significant age and sex main effects ($p < .05$). As age increased "Self-Respect" was valued more highly (under 23 = 6.28; 23-29 = 5.69; over 30 = 3.86). Business females ranked it more importantly than males (females = 4.75; men = 6.38). Although it is top ranked by both men and women, perhaps women feel that they must retain a greater sense of dignity, character and conduct as they operate in a still predominately male business environment. "Happiness" was ranked second with a significant age main effect ($p < .05$). The younger age groups tended to value "Happiness" more highly (under 23 = 6.07; 23-29 = 5.90; 35-39 = 6.27) while those over 39 ranked it less important (9.38). "Freedom" was ranked third with a significant sex X age interaction. "Family Security" was ranked fourth with no significant differences noted. The School of Education terminal values showed that the first four ranks were "Self-Respect," "Family Security," "Freedom," and "Happiness." No significant effects were noted for these values. The terminal value results for business and education graduate adult learners are consistent with those of Londoner, Linder and Bauer (1986).

The results of the terminal values in the School of Dentistry indicated the following findings. Dental subjects ranked "Happiness," "Family Security," "Self-Respect" and "Freedom" as their first four values. There were no statistically significant differences in age or sex for the first three values. Most dental learners view them similarly. "Freedom," the fourth ranked value, had a significant age difference ($23-29 = 6.47$; $35-39$ year old = 9.17 , $p < .05$). It appears that younger adults believe that they will have more freedom in their careers than do their older colleagues. To summarize, persons in all three schools generally view their top terminal values similarly except for "A Sense of Accomplishment" for business students. There, subjects ranked it fifth and seemed to perceive that the business world provides a greater sense of personal achievement than do either education or dentistry (ranked seventh and eighth respectively).

For the instrumental values within the School of Business "Honest," "Responsible," "Capable," "Independent" and "Ambitious" were the top ranked values. No statistically significant differences were observed for "Honest" and "Responsible." All age groups and both sexes viewed these values similarly. "Capable" had a significant age difference. As age increased the mean rank scores for this value descended (under 23 = 10.0 ; over 30 = 5.38 , $p < .05$). Being perceived as "Capable" was more important to these older adult learners in business. No statistical differences was observed for "Independent." "Ambitious" had a significant sex difference. Females in business obtained a mean rank value of 8.41 while males' mean rank score was 6.54 ($p < .05$). Apparently males valued being "Ambitious" more than females. Perhaps women in business are less willing to be perceived as being ambitious and a climber as they are to embrace other values as vehicles for obtaining desired terminal goals. "Loving" was sixth ranked and had a significant sex difference. Consistently, females of all ages received lower mean rank scores than males (males = 8.53 ; females = 6.69 , $p < .05$). Older males clearly valued "Loving" less importantly than older females. It is possible that older men wish to be perceived as ambitious by their colleagues (still productive and "in the hunt?") while older women wish to be perceived in a more nurturing way as a means for obtaining their goals in the business world. In an earlier study (Londoner, Linder & Bauer) where undergraduates were also analyzed, "Loving" and "Capable" were ranked third and sixth while in this study with graduates the values flip-flopped in rank. It may be that undergraduates in business possess a yet untried sense of nurturing and caring which later, in the reality of the business world, yields to being perceived as "Capable" (and tough-minded?). The School of Education instrumental values data showed that "Honest," "Responsible," "Loving," "Independent," "Capable" and "Intellectual" were the top six ranked values. No significant differences were noted for "Honest," "Responsible" and "Capable." A significant sex difference was noted for "Loving" (males = 7.96 ; females = 6.44 , $p < .05$). "Independent," ranked fourth, had a significant sex difference (males = 9.38 ; females = 7.33 , $p < .05$). Apparently, females in education valued their work as a means of obtaining independence as compared to males in education. "Intellectual" was ranked sixth and had a significant sex X age interaction, (males over 39 = 11.13 ; females over 39 = 8.07 , $p < .05$). Women in education generally viewed intellectual endeavors more favorably than men educators. School of Dentistry instrumental values data showed that the top five ranked values were "Honest," "Responsible," "Loving," "Independent" and "Ambitious." No significant differences were noted for these values. All age groups and both sexes viewed them similarly. To summarize, generally the instrumental means for achieving desired terminal goals were viewed similarly.

"Capable" was ranked third by business subjects while education and dental students ranked it fifth and sixth. "Ambitious", ranked fifth by business and dental students, was ranked eleventh by educators. Educators apparently feel that it is not a place to express ambitious values. Perhaps education tends to draw more nurturing and caring persons who are less ambitious than persons in the other fields. This is supported by the fact that "Helpful" was ranked seventh by educators and only ninth and thirteenth by dental and business students, respectively.

Question four asked what differences were obtained for the sexes across all ages between schools. Table 2 displays the three-way ANOVA for the terminal & instrumental values. "Self-Respect," ranked either first or third

Table 2. Mean Ranks for Values and Significant Effects from Analysis of Variance, Ignoring all Factors Except Age, Sex and School.

Instrumental Value	Business (n = 212)		Dentistry (n = 163)		Education (n = 255)		Significant Effect	Terminal Value	Business (n = 212)		Dentistry (n = 163)		Education (n = 255)		Significant Effect
	Mean Rank of Rank Value		Mean Rank of Rank Value		Mean Rank of Rank Value				Mean Rank of Rank Value		Mean Rank of Rank Value		Mean Rank of Rank Value		
Ambitious	7.50	(5)	7.93	(5)	9.85	(11)	A	A Comfortable Life	9.81	(10)	9.48	(10)	10.49	(11)	
Broadminded	8.92	(8)	8.99	(7)	8.72	(8)		An Exciting Life	10.87	(12)	10.86	(12)	10.49	(14)	
Capable	7.27	(3)	8.37	(4)	7.84	(5)	A	Sense of Accomplishment	7.28	(5)	8.25	(8)	8.22	(7)	
Cherful	10.01	(10)	10.10	(11)	10.53	(14)	A	A World of Peace	11.14	(13)	10.73	(12)	9.11	(10)	
Clean	14.29	(17)	12.88	(17)	13.04	(17)	A	A World of Beauty	13.75	(18)	13.12	(16)	12.76	(16)	
Courageous	9.33	(9)	10.71	(12)	10.28	(12)	L	Equality	12.55	(17)	11.96	(15)	10.69	(13)	
Forgiving	10.12	(11)	9.36	(8)	9.48	(9)		Family Security	6.71	(4)	6.05	(2)	5.92	(2)	
Helpful	10.16	(12)	9.29	(9)	8.64	(7)		Freedom	6.69	(3)	7.08	(4)	6.99	(3)	
Honest	5.54	(1)	6.65	(1)	5.26	(1)		Happiness	6.53	(2)	5.69	(1)	7.25	(4)	S, L
Imaginative	10.80	(15)	12.29	(16)	11.49	(15)		Inner Harmony	8.35	(9)	7.33	(5)	7.30	(5)	A
Independent	7.29	(4)	7.89	(4)	7.73	(4)	S, AL	Nature Love	7.95	(7)	8.00	(7)	8.67	(9)	
Intellectual	8.75	(7)	10.20	(12)	8.59	(6)	SL	National Security	12.52	(16)	13.99	(18)	12.58	(15)	L
Logical	10.22	(14)	10.96	(14)	10.39	(12)	S	Pleasure	12.09	(14)	11.71	(14)	13.26	(17)	A
Loving	7.74	(6)	6.43	(3)	6.76	(3)	A, S	Salvation	10.72	(11)	9.93	(11)	10.67	(12)	
Obedient	15.88	(18)	14.12	(18)	15.36	(18)	S	Self-Respect	5.68	(1)	6.22	(2)	5.17	(1)	S, AL
Polite	12.40	(16)	11.00	(13)	11.54	(14)		Social Recognition	12.35	(15)	13.55	(17)	13.49	(18)	
Responsible	5.63	(2)	6.19	(2)	5.69	(2)		True Friendship	8.07	(8)	7.52	(6)	8.17	(6)	S
Self-Controlled	10.16	(12)	9.45	(10)	9.80	(10)	S	Wisdom	7.92	(6)	9.25	(9)	8.26	(8)	A, S

A=Age, S=Sex, L=School, AS=Age Sex, AL=Age School, SL=Sex School

A=Age, S=Sex, L=School, AS=Age Sex, AL=Age School, SL=Sex School

in all three schools, had a significant sex difference (males = 6.26; females = 5.09, $p < .05$). For "Happiness" ages was significant across all schools. Older learners across all schools valued "Happiness" less importantly than younger learners. Business students over 39 clearly valued "Happiness" less importantly than all other age groups across schools. "Freedom," ranked either third or fourth, had significant sex and School differences. Business and Education students ranked it more importantly than dental students (mean ranks = 6.69, 6.99 and 7.08 respectively, $p < 0.5$). Males valued it more importantly than females (males = 6.62, females = 7.17, $p < .05$). For the instrumental values "Honest," "Responsible," "Capable," "Independent," "Ambitious" and "Loving" were the top rated values. No significant differences were noted for "Honest" and "Responsible." They are viewed similarly by all subjects. "Loving," ranked third by dental and education students (ranked sixth by business students) obtained significant age and sex differences. Across all schools for both sexes, as age increased "Loving" became less valued (under 23 = 6.59; over 39 = 8.25, $p < .05$). This was especially evident for older students in business. Across all schools and ages women valued "Loving" more (females = 6.44; males = 7.96, $p < .05$). Males over 39 in business had a mean rank score of 10.77 and women in business over 39 had a score of 7.38 ($p < .05$). Older men in education valued it less than women in education (9.25 vs. 7.48, $p < .05$). Clearly men in both schools perceive that "Loving" is less valuable than do females over 39. "Capable" was ranked sixth by dental students and fifth and third for education and business students. Age was significant with persons over 39 valuing it more than younger ones under 23 (over 39 = 7.37; under 23 = 8.32, $p < .05$). Business students over 39 valued it more than dental students over 35 and education students over 35 (Business over 39 = 5.38; Dental over 35 = 8.17; Education students over 35 = 7.97, $p < .05$). As stated earlier older adults in the business world may need to be perceived as still capable and productive.

Question five asked what relationship existed between sex, age, LOC and values of adult graduate learners in all three schools. Partial correlations of terminal value rankings with LOC scores controlled for age and sex for business, dentistry and education are displayed in Table 3. A positive correlation showed that the more internal one was the more one tended to

Table 3. Partial Correlations of Terminal Value Rankings with Locus of Control Scores of Graduate Students, Controlling for Age and Sex Separately for Each School.

Value	School of Business Correlation P-Value	Value	School of Dentistry Correlation P-Value	Value	School of Education Correlation P-Value
Freedom	.118 .033	Wisdom	.140 .040	Wisdom	.083 .081
Sense of Accomplishment	.098 .074	A World of Peace	.108 .083	Inner Harmony	.081 .078
A World of Peace	.084 .096	National Security	.090 .170	Equality	.074 .089
National Security	.073 .186	Salvation	.090 .120	Self-Respect	.068 .159
Self-Respect	.070 .218	Family Security	.081 .197	Sense of Accomplishment	.068 .122
Equality	.069 .247	Self-Respect	.028 .659	Mature Love	.051 .295
An Exciting Life	.043 .431	Sense of Accomplishment	.014 .824	Freedom	.048 .320
Social Recognition	.038 .522	Freedom	.011 .863	A World of Peace	.048 .303
Wisdom	.000 .995	A World of Beauty	-.002 .971	Social Recognition	.037 .467
A World of Beauty	-.003 .954	Mature Love	-.037 .593	A World of Beauty	.020 .670
Salvation	-.009 .866	Social Recognition	-.042 .539	An Exciting Life	-.022 .618
Happiness	-.014 .797	Inner Harmony	-.052 .383	True Friendship	-.039 .429
A Comfortable Life	-.026 .630	Equality	-.054 .418	Salvation	-.045 .344
Mature Love	-.061 .287	An Exciting Life	-.058 .402	National Security	-.058 .213
True Friendship	-.080 .155	True Friendship	-.060 .354	Happiness	-.061 .164
Pleasure	-.085 .126	A Comfortable Life	-.117 .042	A Comfortable Life	-.099 .037
Inner Harmony	-.146 .010	Pleasure	-.142 .023	Family Security	-.103 .023
Family Security	-.154 .004	Happiness	-.184 .002	Pleasure	-.128 .006

subscribe to that value. Negative correlations indicated that the more external the person the more he/she subscribed to that value. The data showed that more internally oriented persons within the School of Business valued "Freedom" ($p = .033$). The p values for "A Sense of Accomplishment" and "A World of Peace," although not significant, indicated a trend toward a positive relationship. Internally oriented persons in dentistry valued "Wisdom" with "A World of Peace" approaching significance. In the School of Education the values that approached significance were "Wisdom," "Inner Harmony" and "Equality." A surprising finding was that "Inner Harmony," valued by internally oriented education students, was valued by externally oriented business students ($p < .01$). "Family Security," associated more with internal persons in dentistry was significantly related to externally oriented persons in business ($p < .01$) and education ($p < .05$). "A Comfortable Life" was significantly valued by external LOC persons in education ($p < .05$) and dentistry ($p < .05$).

Table 4 displays the partial correlations for the instrumental values for all three schools. For Business students none of the values were significantly correlated with an internal LOC although "Independent" approached significance. Although only approaching significance, "Forgiving" tended to be associated with

Table 4. Partial Correlations of Instrumental Value Rankings with Locus of Control Scores of Graduate Students, Controlling for Age and Sex, Separately for Each School.

Value	School of Business Correlation P-Value	Value	School of Dentistry Correlation P-Value	Value	School of Education Correlation P-Value
Independent	.097 .092	Self-Controlled	.117 .050	Logical	.068 .148
Ambitious	.079 .185	Courageous	.104 .099	Intellectual	.053 .268
Responsible	.076 .112	Logical	.085 .213	Imaginative	.044 .364
Capable	.057 .315	Intellectual	.046 .529	Courageous	.042 .354
Courageous	.035 .508	Honest	.045 .439	Ambitious	.042 .390
Obedient	.027 .590	Loving	.028 .675	Independent	.037 .459
Polite	.019 .732	Polite	.022 .724	Broadminded	.031 .507
Self-Controlled	.011 .842	Responsible	.017 .741	Honest	.031 .506
Helpful	.010 .868	Helpful	-.003 .961	Responsible	.029 .536
Cheerful	.006 .909	Obedient	-.012 .845	Capable	.018 .702
Logical	-.018 .759	Clean	-.015 .828	Helpful	-.015 .769
Broadminded	-.025 .653	Ambitious	-.016 .788	Loving	-.022 .659
Honest	-.028 .617	Forgiving	-.017 .792	Obedient	-.041 .361
Loving	-.039 .497	Broadminded	-.024 .734	Forgiving	-.048 .133
Intellectual	-.040 .467	Cheerful	-.032 .549	Polite	-.050 .218
Imaginative	-.055 .316	Independent	-.079 .212	Clean	-.054 .226
Clean	-.065 .239	Capable	-.143 .014	Self-Controlled	-.062 .194
Forgiving	-.099 .078	Imaginative	-.170 .004	Cheerful	-.151 .000

external LOC persons. Internally oriented dental students valued "Self-Controlled" significantly ($p = .05$). Surprisingly, "Capable" was significantly valued by externally oriented dental students ($p = .01$) as was "Imaginative" ($p = .01$). Perhaps because dental students are still involved in a carefully controlled clinical setting, the more external persons strive harder to be perceived by their instructors as being capable and imaginative in their efforts. For education graduate students none of the values were significantly correlated with an internal LOC. "Cheerful" was significantly

related to being externally oriented by education students. Note that while internally oriented dental students valued "Self-Controlled" highly ($p = .05$), externally oriented education students tended to value it.

CONCLUSIONS

It is clear that adult learners in all three schools display similar LOC patterns. Older adult learners tend to be more self-reliant in their self-perceptions. Faculties should strive to devise ways of letting their older adult learners go more on their own. For example, self-directed learning is one strategy as is more independent readings, reports and field studies. It is also clear that learners in all three schools view the top ranked terminal values similarly. They differ, however, in the instrumental values. Faculties in the three schools should be aware that the ways for achieving worthy goals are dissimilar for different adult learners. By helping their learners modify their value positions, somewhat through the use of participatory group techniques, they may become less "uptight" or even more assertive and ambitious as they re-enter their work places.

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YOUTHFUL HIGH SCHOOL NONCOMPLETERS: AN ANALYSIS AND SYNTHESIS OF LITERATURE ON STUDENT AND PROGRAM CHARACTERISTICS

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Abstract: Youthful high school noncompleters possess the following characteristics: low academic achievement/ability, inadequacy in the social context of schooling, less academically stimulating home and family environments, and poor course selections and fewer credits in high school. Successful educational and training programs share some common characteristics in meeting the learning needs of such students.

This paper provides an analysis and synthesis of the literature on the characteristics of out-of-school youthful noncompleters and the characteristics of several exemplary educational and training programs that have published the results of efforts to effectively address their learning needs. It is anticipated that an analysis of successful programs would help policy makers and educational practitioners understand the significance of the various components of such programs and how these components interact to produce successful outcomes.

Review of the Literature

The literature was reviewed to achieve the following objectives:

1. identify the results of research that provide insight into the magnitude of the problem of school noncompletion, and the characteristics and needs of youthful noncompleters;
2. identify and describe, in detail, the interacting elements of one exemplary program that is characteristic of the efforts used by employment and training programs, adult literacy programs, and alternative high school programs to effectively serve youthful noncompleters.

A computer search was conducted to identify documents published between May, 1976 and May, 1986. The search used the index compiled by ERIC (Educational Resources Information Center) to identify journal articles, research reports, reviews of the literature, project descriptions, and evaluative reports which discussed dropouts, disconnected youth, alienated youth, or at-risk youth, and which discussed the following types of programs; adult literacy, adult basic education (ABE), basic skills, high school equivalency, or demonstration. The search yielded a 106 page annotative bibliography of 312 documents. This number of documents was culled to a more manageable number by selecting for further review only those documents which addressed the educational and training needs of out-of-school youthful noncompleters. The search was extended by using the bibliographic references of these documents to identify other relevant literature, and through articles and books referred to

the author from friends and colleagues.

Criteria for Selecting Programs

Criteria were developed to identify and select examples of exemplary programs. A total of 26 project descriptions were identified. Of this number, 20 were eliminated from further consideration because they either did not address the needs of out-of-school youthful noncompleters, did not meet the established effectiveness criteria, or the project descriptions were too limited to provide a useful guide for purposes of replication. The three project descriptions used in the analysis were chosen from the six remaining descriptions.

The Magnitude of the Problem

Previously, the labor market was able to absorb most of the individuals with a limited education, but increasingly, as this country attempts to make the transition from an industrial to an information-based economy, those who lack basic skills, career skills, and the social skills to be successful in the workplace will likely encounter unemployment, welfare, and incarceration in this nation's jails and prisons. Several demographic and socioeconomic trends suggest some of the reasons why high school noncompletion is increasingly being viewed as both an individual and a social problem.

A Changing Economic Climate

We have lost the familiar U.S. dominated production process markets like basic steel, textiles, clothing, and footwear. To regain its competitive vigor, the U.S. economy must explore alternative means of producing goods and services, e.g., precision manufacturing, which requires technology driven, flexibly produced, custom engineered processes (Mann, 1986). These processes will require workers who are literate, communicate effectively with other employees, and are capable of being trained and retrained in response to changing job demands (Leroy, 1983).

Decreased Job Opportunities

People who have not completed high school are employed mostly in low-wage, low-skill jobs that are located primarily in the blue-collar, private household, and farm occupations. However, in the future, noncompleters will have trouble finding even these types of jobs, because: (a) these occupations are expected to account for a decreasing share of the total jobs that become available in the economy during the future, and (b) for the openings that do arise in these occupations, young people who do not have a high school education are likely to face growing competition from their peers who have more schooling (Weidmann and Friedmann, 1984).

An Aging Society

Our society is aging rapidly and is becoming more dependent economically on a smaller and more largely undereducated, disadvantaged, minority youth population. In 1950, 17 workers paid the social security benefits of each retiree. By 1992, only three workers will provide the funds for each retiree, and one of

the three workers will be a minority person (Institute for Educational Leadership, 1986).

The Economic Costs of Noncompleters

Noncompleters will earn \$237 billion less over their lifetimes than will high school graduates. Thus, state and local governments will collect \$71 billion less in taxes (RIT, 1985). Therefore, Mann (1986) estimates that governments could spend \$71 billion on programs for noncompleters and still break even.

The Characteristics of Noncompleters and Their Families

The most valid and reliable research findings regarding the specific characteristics of youthful noncompleters and their families has resulted from national studies utilizing longitudinal data. The High School and Beyond (HS&B) study for the sophomore 1980 cohort, of approximately 30,000 students attending 1,105 public and private secondary schools nationwide, provided the most recent longitudinal data in which noncompleters were systematically sampled before and after their decision to leave school.

Characteristics of Noncompleters

Wehlage and Rutter (1986) utilized discriminate analysis in order to determine how noncompleters in the HS&B study differed from: (1) students who stayed in school but did not plan to attend college, and (2) those students who planned to attend college. They found that two significant functions distinguished the groups-- "Academic Achievement/Ability", and "Social Context of Schooling"--which successfully predicted 63 percent of the noncompleters, 54 percent of the stay-ins, and 84 percent of the college bound.

Low Academic Achievement/Ability

The first function, "Academic Achievement/Ability" explained 89 percent of the variance between the groups and seemed to discriminate primarily between noncompleters and the college-bound. This function suggested that, when compared to the college-bound, noncompleters were primarily characterized by: (a) Lower Expected School Attainment, i.e., how much formal schooling students expected to obtain in the future, (b) Lower Test Scores, based on a battery of HS&B tests at tenth grade that measured achievement and ability in mathematics, vocabulary, language and grammar usage, science, and civics, (c) Lower Socio-economic Status, based on student reports of five family characteristics including father's occupation, father's and mother's education, family income, and the presence of certain household items, and (d) Lower Grades, i.e., the self-reported letter grades students had received in school.

Inadequacy in the Social Context of Schooling

The second function, "Social Context of Schooling", accounted for 11 percent of the variance between the groups and seemed to discriminate between noncompleters and stay-ins. When compared to their academically similar peers, this function

suggested noncompleters were significantly more engaged in: (a) Truancy, i.e., the self-reported number of school days missed when not sick, (b) Discipline Problems, i.e., an assessment of students' discipline problems in the past year, e.g., being suspended, placed on probation, or cutting classes every once in a while, (c) Lateness, i.e., the number of days a student was late to school, and (d) Employment, i.e., the self-reported number of hours a week the student worked at a job.

Less Academically Stimulating Home and Family Environments

Ekstrom et al. (1986) analyzed data from the HS&B study. They compared the households of stayers and noncompleters and found that noncompleters: (a) had fewer study aids present in their homes, (b) had less opportunity for non-school related learning, (c) were less likely to have both natural parents living at home, (d) had mothers with lower levels of formal education, (e) had mothers with lower educational expectations for their offspring, (f) had mothers who were more likely to be working, and (g) had parents who were less likely to be interested in or to monitor both in-school and out-of-school activities.

Poor Course Selections and Fewer Credits

Weber (1986) analyzed the HS&B data to compare noncompleters to potential noncompleters (i.e., completers with a high probability of not completing) and attempted to define operationally their vocationally related experiences while in high school. He found that noncompleters: (a) earned significantly fewer vocational credits, (b) earned significantly fewer total credits, (c) enrolled in fewer courses--both vocational and nonvocational--and they received significantly lower grades in those courses, (d) earned a higher ratio of consumer/homemaker, industrial arts, and other "exploratory" vocational credits (as contrasted with job-specific training), (e) were significantly less likely to have had a vocational speciality, i.e., a vocational service area in which they earned over 60 percent of their vocational credits, (f) tended to earn more work-study credits and those credits tended to make up a significantly larger part of their programs, and (g) reported working significantly more hours per week and earning more per hour, primarily in jobs sponsored by CETA or some other government organization rather than by private industry/business.

Characteristics of Successful Programs

Three case-histories of successful programs were analyzed in depth to identify the component elements and attributes that

could be responsible for their success in meeting the learning needs of youthful noncompleters. Some of the characteristics of the programs are identified below.

The Youth Chance Program

The Youth Chance program (Lesser and Ogden, 1980) demonstrated the efficacy of a non-residential occupational skills training program which focused on the needs of youthful noncompleters for psychological counseling, job development and the integration of education and training. The program provided an unsystematic counseling approach that allowed students to discuss their school, personal, and job problems; and an emphasis on both job training during the program and job placement upon completion of the program. The program illustrated several strengths: (1) a diverse funding base, that is, a combination of government and philanthropic funding sources, (2) linkages with community agencies and potential employers of participants, (3) a policy of open admissions/tight regulations, which imposed and enforced clear, strigent rules, (4) paid employment under the supervision of a trained supervisor, (5) emphasis on employment skills, e.g., job searches, job development, workshops, etc., (6) six to nine-month program cycles, and (7) an educational component which focused on improving the employability, self-esteem and skill needs of participants.

The Adult Education Dropout Project

The Adult Education Dropout Project (Long, 1981) demonstrated the feasibility of reducing the number of youthful noncompleters in the general population by helping them to take advantage of adult literacy programs as an alternative to traditional high schools. The program demonstrated several strengths: (1) a comprehensive referral system which placed the responsibility for the identification, contact, and referral of youthful noncompleters on a diverse group of individuals and agencies interested in the plight of youthful noncompleters, (2) the techniques of involving secondary school personnel in the governance and operations of adult education programs, e.g., placement on advisory board, providing opportunities to visit the program and periodic progress reports on students, etc., and (3) the referral efforts increased the number of youthful noncompleters in the adult education program by about 100% over the previous year's enrollment.

The Career Intern Program

The Career Intern Program (Langsdort and Gibboney, 1977) demonstrated the ability of an innovative labor market preparation program to develop and implement an effective alternative high school that targets the needs of both in-school at-risk youth and out-of-school youthful noncompleters. The program demonstrated several strengths: (1) career-orientated instruction and activities, e.g., the development of a Career Development Plan, the Career Counseling Seminar, "Hands-Ons", continuous diagnosis/assessment, and others, that were integrated into the students' curriculum, (2) individualized instruction

which utilized instructional techniques such as field trips and independent research, and was tailored to the needs, interests, and learning styles of each learner, (3) emphasis on the emotional needs of each learner, and flexibility for learners to pursue either the GED, a high school diploma, or to reenroll in the traditional school, (4) the maintenance of a low student/teacher and student/counselor ratio to assure that each student received personalized services, (5) a program philosophy that recognized the students as trustworthy individuals and contributed to building an atmosphere that provided students with a sense of security and acceptance, (6) two comprehensive evaluation designs which carefully tested the results of the project and efforts to replicate its results, and two comprehensively written reports of the project's results and its demonstrated replicability.

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RETRAINING AFTER JOB LOSS AS A FUNCTION OF LIFE STAGE

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Abstract: Findings from a study of 233 dislocated workers in JTPA programs indicate that the experience of retraining is partially a function of life stage. For 6 of 16 questionnaire items, responses by middle-aged persons differed significantly from responses given by young and pre-retirement aged adults.

Most adults find returning to school after years of working a difficult transition at best. More and more programs that attract adult students offer special workshops and other support services that help reentry students adjust to the learning environment. It can be speculated that the adjustment would be especially difficult for adults who, because they have lost their jobs, must learn new skills to become employable. Such is the case with Title III Job Training Partnership Act (JTPA) programs. These programs have as their goals vocational guidance, job-search assistance, referral, and training of men and women of all ages and economic levels who have lost their jobs as a result of plant closings, manpower reductions, and technological advancements. Most JTPA programs prepare persons for entry-level positions in areas such as data processing, electronics, word processing, and so on, and most are sponsored by technical schools and community colleges.

Adults in JTPA programs are having to cope with being a student, a role most would not have taken on voluntarily, and with being unemployed. The trauma of job loss and unemployment is well documented in the literature. Research findings suggest that job loss results in feelings of low self-esteem, inadequacy, increased stress, changes in health, and depression (Liem and Rayman, 1982; Amundson and Borgen, 1982; Shelton, 1985).

Less investigated has been the unemployed adult's experiences with retraining programs. Research on JTPA programs has investigated either the demographics of who is participating, or the effectiveness, usually measured by job placement, of the training (Daymont, 1985). Of interest to adult educators, and the focus of this study, are the participants' experiences with returning to a learning situation and assuming the role of student.

How a person reacts to and interprets a life event such as job loss or retraining is dependent upon numerous psycho-social factors (Schlossberg, 1984; Knox, 1977). One study was found which correlated age with factors related to unemployment, but not retraining. In that study, middle-aged men experienced greater psychological deterioration, and financial stress and strain than younger or older unemployed males (Warr and Jackson,

1984). Knowledge of life stage differences and research in adult development help practitioners better understand and respond to adult students in both adult education and higher education (Merriam, 1984; Chickering, 1981).

Of particular interest to this researcher is the relationship between one's position in the life cycle, or life stage, and how that influences the way in which an event such as retraining is experienced. It can be expected, for example, that a young adult who has only recently moved from school to job would not have quite the adjustment to a retraining program that an older dislocated worker would have. The purpose of this study was to determine whether experiences in a retraining program are a function of life stage.

METHODOLOGY

Data collection consisted of a two-step procedure. First, twelve adults ranging in age from 18 to 63 years were interviewed in-depth by the researcher concerning their experience with job loss and the JTPA program in which they were participating. From these interviews, and from a review of the literature on life stages, a 40-item questionnaire was developed. In addition to demographic items on age, sex, marital status, and level of education, the questionnaire contained Likert scale items about circumstances surrounding the job loss, mental and physical health, informal support networks, and experiences in a retraining program.

The instrument was presented to a panel of employment and training counselors, revised, and then pilot-tested with 25 adults in a JTPA program and revised as necessary. It was then distributed to participants in several northern Illinois JTPA programs. Three hundred questionnaires were given out to adults in JTPA classes at four community college sites. Two hundred-thirty-three were mailed back to the researcher for a return rate of 77.6%.

Sample

The sample consisted of 233 dislocated workers ranging in age from 20 to 65. There were 97 (41.6%) young adults between the ages of 20 and 35, 92 (39.5%) middle-aged adults between 36 and 49 years of age, and 44 (18.9%) pre-retirement adults aged 50 and older. Men and women were fairly evenly distributed across the three age groups. 119 or 51.5% of the total sample were men, and 112 or 48.5% are women. Of those who responded, 5.6% had less than a high school education, 39% were high school graduates, 42.9% have had some post-secondary or college, and 12.5% were college graduates. Although some had been unemployed for over two years, the great majority (74.3%) have been out of work less than a year.

Independent and Dependent Variables

The main independent variable, life stage, was formed by collapsing chronological age into three categories: young adulthood (18-35 years); middle age (36-49 years); and pre-retirement (50 and older). Sixteen items from the questionnaire dealing with the retraining experience were chosen as dependent variables in this analysis. One cluster of five statements dealt with the adult's first reaction to returning to school. A second cluster presented four statements asking respondents how they felt about the experience after being involved in the program for a period of time. A third set of seven statements asked respondents to indicate to what extent this learning experience differed from their earlier experiences as a student. All statements were responded to on a four-point Likert scale of "strongly agree," "agree," "disagree," or "strongly disagree."

Data Analysis

Means and standard deviations were calculated for each of the sixteen retraining items. These were figured by assigning a numerical value to each of the possible responses under each item. The most negative response (Strongly Disagree) was assigned a value of "1" and the most positive response (Strongly Agree) was assigned a value of "4." Analysis of variance or main effects and interactions using stage of life, sex, and education were computed. Due to the exploratory nature of this study, the .05 level of significance was used to evaluate the relevant F-ratios. On those items where a significant difference was found, a Tukey post-hoc comparison was used to reveal the exact nature of the difference.

Results

Results are presented according to the three areas of (1) first reaction to returning to school, (2) feelings about the experience, and (3) differences in present and earlier experiences as a student.

First Reaction to Returning to School

Respondents were asked to describe their initial reaction to returning to school by indicating the extent to which they agreed with the following five statements:

- I was afraid I wouldn't be able to do the work
- I knew I could do it as long as I tried
- I was excited about learning something new
- I feared I was too young or too old
- I didn't want to return to school

On two of the statements ("afraid" and "too young or too old"), significant main effects were found with regard to life

stage ($p < .05$) and education ($p < .01$). The Tukey Honest Significance Difference Test was used for post hoc comparisons. With regard to the statement "afraid I wouldn't be able to do the work," it was found that younger and older adults tended to disagree with the statement ($x = 2.90$ and 3.00 , respectively), while middle aged adults were somewhat more fearful ($x = 2.49$).

When asked if their age (being too young or too old) was a source of being afraid of returning to school, significant differences were found among the three age groups and two levels of education. The youngest group disagreed ($x = 3.23$) while middle agers ($x = 2.58$) and pre-retirement adults ($x = 2.72$) tended to agree with the statement.

Feelings About the Experience

Respondents were asked the extent to which they agreed with the following four statements regarding their experience after having been involved in the program for a period of time:

- I enjoy learning in the program
- It is very difficult
- I think about dropping out
- It is easier than I thought it would be

Two main effects were uncovered in this cluster of items. Age was a factor in whether the respondent felt the program was difficult ($p < .05$). An inspection of the means from the Tukey post-hoc comparison reveal that the youngest and oldest age groups tended to disagree that the program was difficult ($x = 2.86$ and 2.92 , respectively). The mean for the middle-aged respondents ($x = 2.54$) reflects more agreement with the statement.

Age comparisons showed a significant difference in regard to persons finding the program easier than expected ($p < .01$). The Tukey post hoc comparison revealed that the significant difference was between the middle age and pre-retirement groups. Middle agers tended to disagree with the statement ($x = 2.40$) while pre-retirement respondents agreed that the program was easier than they thought it would be ($x = 2.96$).

Differences in Learning Experiences

The third set of statements asked respondents how this most recent learning experience differed from earlier experiences as a student. Seven statements were presented for respondents to indicate their agreement or disagreement. They are:

- I learn more easily
- I am more interested and involved
- The material is more meaningful
- My teachers treat me like an adult
- I enjoy my studies

- I am able to use things I had learned in the past
- I am more serious

There were no significant differences among the three age groups in respect to items of being treated like an adult, enjoying the studying, and being able to use things from the past. The one statement to have a significant main effect of age was "the material is more meaningful" ($p > .05$). According to the Tukey post hoc comparison, the mean response of the pre-retirement adults differed from the young and midlife adults' mean response. Pre-retirement adults agreed more strongly with the statement than did the other two groups.

Summary and Discussion

The purpose of this study was to determine whether experiences in a retraining program are a function of life stage. Specifically, the study was guided by the question of whether there were differences in how young, middle aged, and pre-retirement adults experienced returning to a learning situation for entry level skills after becoming unemployed. Of secondary interest (though not discussed here), were differences in the experience according to sex and level of previous education.

For five of the sixteen items, a significant difference was found with regard to life stage. The five items are: (1) afraid I wouldn't be able to do the work; (2) feared I was too young or too old; (3) program is very difficult; (4) program is easier than expected; and (5) material is more meaningful compared to earlier school experiences. For one item, "I learn more easily," a significant interaction of life stage and sex was found. Tukey post hoc comparisons which were calculated to identify the exact nature of the differences, revealed an interesting pattern of response with regard to these items. Middle aged (36-49 years) respondents differed from either or both the younger and pre-retirement groups. Middle aged students were more afraid they wouldn't be able to do the work, felt they were too old, found the program more difficult than expected, disagreed that it was easier than expected, and disagreed (mid-life women only) that they learn more easily now. Taken as a whole, these findings suggest that middle aged dislocated workers returning to school have fears and insecurities about their ability to perform as students. This finding is certainly congruent with the literature on adult development and learning (Merriam, 1984; Knox, 1977). Practitioners who design programs, teach, or counsel middle-aged learners might incorporate confidence building activities and/or study skills to deal with the anxiety of returning to school.

A life stage difference was also found with regard to how this experience could be differentiated from earlier experiences as a student. Pre-retirement (50 years and older) adults differed significantly from the other two groups in agreeing with

the statement that the material is more meaningful. This finding can perhaps be explained by the older adults' accumulation of life experiences which would make new material more meaningful and hopefully more easily integrated with past learning. The finding might also allude to the functioning of crystallized intelligence which increases with age and the accumulation of life experience (Long, 1983).

Overall, of sixteen learning related items, life stage affected six. These findings, though modest, offer some support for the notion that the interpretation of a life experience, such as returning to school, is at least partially a function of life stage. Taking into account developmental and life stage differences among adult students cannot but help to enhance the planning and implementation of adult learning experiences.

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THE UNIVERSITY'S ROLE IN CONTINUING PROFESSIONAL EDUCATION
IN THE UNITED KINGDOM AND NORTH AMERICA:
THE IMPACT OF SOCIETAL VALUES

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Abstract: The research presented in this paper is to provide insights about the current societal values in the United Kingdom and North America, and how these values impact the university's involvement with continuing professional education.

Statement of the Problem

Upon reviewing adult education literature, numerous parallelisms exist between the United Kingdom and North America, particularly during the beginning phases (Axford, 1969). While these parallels in liberal arts education continue along a similar path, other facets of adult education in these countries have taken a decidedly different direction. A major dissimilarity which has subsequently developed is the subject of continuing professional education (CPE): 1) its significance; 2) its effectiveness; 3) the justification of university involvement; and 4) providing that the validation of justification exists, what would be an appropriate participatory role in a university setting.

Continuing professional education has garnered an established and increasing interest in North American universities (Baskett, 1986; Belsham, 1986; Cervero, Rottet, & Dimmock, 1986; Grabowski, 1982). Concurrently, in the United Kingdom, adult educators have continued to debate the justification of CPE as a part of adult education in the constructs of a university's mission (Jarvis, 1985; Paisley, 1985; Stock, 1980).

By reviewing the literature, it is possible to obtain an inferential understanding of the emerging and conflicting philosophies surrounding CPE. However, in order to procure a perception of the veritable principles from which these conflicts evolve, a direct experience with adult educators in their own cultural environment was deemed essential. Therefore, the issues which are explored in this study are the product of firsthand encounters with the adult education ethos prevalent in the United Kingdom circumambient CPE combined with observations of the practices and philosophies currently existing in North America. Therefore, the investigations and findings presented in this study are of value to university educators who are involved in the interpretation and implementation of an area of adult education which is directly affected by societal influence. Considering that international adult education has generated an increased emphasis among those in the field, it has become expedient to gain knowledge on how and why commonalities and contrasts exist.

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Methodology

For this study, the framework of a grounded theory research approach which utilized both formal and substantive theory constructs was employed. This allowed the researcher to explore and develop relevant topical categories. Within these categories, relationships were defined, discussed, and illustrated by the data used to generate them.

Data was obtained by the researcher upon conducting comprehensive personal interviews with over seventy-five adult educators at nine major universities located throughout Britain, in 1986. These universities included: 1) The University of Birmingham; 2) The University of Bristol; 3) Cambridge University; 4) The University of Hull; 5) The University of Leeds; 6) The University of Manchester; 7) The University of Nottingham; 8) The Open University; and 9) Oxford University. Compilation of data in the United Kingdom and North America also involved: 1) observation of university adult programs; 2) interaction with graduate adult education classes; 3) professional activity interaction; and 4) access and review of current related literature.

Description of the Data

Whereas the consensus among adult educators in North America define continuing education as a function, or a subset of the broader term, "adult education," many British counterparts draw a marked theoretical distinction. This definitional difference has been extended to the actual implementation of educational practices. Traditionally, British education for adults has been deeply rooted in the liberal arts. Consequently, continuing professional education (CPE) has been termed post-initial education. British educator, Peter Jarvis (1985, p. 67), noted the dissimilarity in these two types of adult education by stating that continuing education must be recognized as a term "with a more restrictive connotation. . . as opposed to liberal adult education."

While the origins of adult education in Britain and America began in an analogous manner, in the early 1900's, the redefinition of the university extension program in the States signaled a shift from traditional university course offerings to subject areas which would answer the needs of the current student population. This redefinition founded the precedent which encompassed CPE as synonymous with adult education.

Historically, British educators have concluded that the primary mission of university adult education (UAE) is to provide adults an opportunity to expand their horizons by enrolling in university extension courses in liberal arts education. However, more recently, the British Advisory Council for Adult and Continuing Education made an attempt to broaden this idea by issuing a discussion report entitled Towards Continuing Education. According to this document (Stock, p. 3), ". . . post-initial education would include occupational training and education, traditional 'liberal' adult education, general academic education, role education and others. . ."

Consequently, the validity of continuing professional education has been debated by adult educators on both sides of the Atlantic. The argument that higher education has compromised the classic academic philosophy by the justification of CPE could be made, thereby resulting in an inferior educational process. Conversely, the issue that universities exist to educate individuals in scholastic pursuits which have a relevant impact has emerged.

Since CPE has been an accepted educational praxis in North America, it has manifested in a present ethos which consists of the adult educator promoting university research and implementation of practical university programs. This thrust has been apparent by an increased emphasis on: 1) university and private sector research projects; 2) university and business training (education) partnership; 3) university and corporate advisory teams; and 4) university research concerning the effectiveness of CPE in various professions (Moser, 1984).

Comprehensive interviews with adult educators in the U.K., which were conducted as a part of this research project in 1986, indicated a continuing reluctance to recognize CPE as relevant in a university's mission. While this is the dominant opinion, some British educators have been rapidly incorporating innovative CPE as an integral part of their UAE program. Some of these universities included: 1) The University of Bristol; 2) The Open University; and 3) Oxford University.

A relatively recent shift in attitude in the U.K. could be attributed, in part, to current economic and political factors. The research in this study yielded an impression which must be initially stated; there exists a tradition lacking a predisposed political philosophy which has been unilaterally adopted by the British educators. Therefore, in universities, a forum for an unbiased examination of various political ideologies has seemed to prevail. Without predispositions, a wide diversity of political ethos has developed in combination with a lack of inhibition concerning open discussion of these ideologies. Therefore, education is approached without regard to any specific bias.

However, this is not meant to imply that social and political forces do not impact education. More specifically, the current political climate in the U.K. appeared to have created a direct effect on British UAE. The present economic situation and political orientation have underscored the need for a shift in focus from the traditional liberal arts education for adults toward a pragmatic, job-related approach, thereby resulting in an increased emphasis on CPE. During interviews which were conducted as a part of this study, the preponderance of adult educators in British universities expressed opposition to this approach. Educators reacted with comments such as "universities are being forced to sell out. . .this negates the true and original intended values of education."

As previously discussed, CPE became an accepted aspect of a university's mission at the turn of this century in the United States. Considering that CPE is not presently undergoing philosophic academic scrutiny in North America, CPE has continued to proliferate. Therefore, the concept of CPE is not generally questioned by adult educators; rather, issues such as its effectiveness have been targets of investigation.

With the postulation that American adult educators predominantly have given credence to CPE, perhaps the American social and political orientation should be addressed. It may be assumed, generally, that the capitalistic philosophy is presupposed in the American educational system. Given the predisposition toward a particular social and political ethos which has fostered linkages between educational values and economic expediency, the outcome has resulted in a perpetual prominence on CPE.

In summary, this study evidenced the following issues in continuing professional education: 1) who decides what is academically relevant, university scholars, or the existing populations' educational needs; 2) can education relevancies be considered academically valid in a university setting; 3) does traditional academic elitism take precedence over developing educational needs; and 4) if evolving educational needs, such as continuing professional education, can be considered academically valid, what criteria should be used to scholastically justify these concerns.

Conclusions

Relationships which were defined, discussed, and illustrated by the data generated in this study resulted in the development of four relevant topical categories: 1) basic definitions of a university's role in adult education; 2) origins of adult education and its relation to the current emphasis on continuing professional education; 3) current economic and political factors which impact the issue of continuing professional education in a university setting; and 4) present attitudes of adult educators and their acceptance or non-acceptance of CPE as a valid facet of university education, including recent trends on how universities have become involved with continuing professional education.

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MIRRORS AND MENTORS: ADULT EDUCATORS AND LEARNERS IN CANADIAN FICTION

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Abstract: A study of The handmaid's tale--a recent, influential, Canadian novel--produced a schema of relationships between adult educators and learners, and offered disturbing insights into adult education as reflected in that story.

A. Statement of the problem

Adult education shapes the community in which it is practiced. At the same time, it reflects the values and purposes of its host culture. Education is thus normative and informed by the society it serves. This is also characteristic of the relationship between fiction and society. Writers since the time of Aristotle have considered their art to be mimetic and heuristic. One well-known Canadian novelist, speaking of literature, says:

Art mirrors and ponders the pain and joy of our experience as human beings. In many parts of the world, and over many centuries, artists have risked and even given their own lives to portray the society around them as they perceived it, and to speak out against injustices. (Laurence, 1987)

Literature depicts and influences society. Thus, laws against pornography are based on the assumption that what people read makes a difference. Hence, adult education and fiction both act as mirrors and mentors to their generative and client culture.

Since adult education is normally congruent with the socio-cultural matrix in which it operates, fiction from its parent culture should offer images of adult education as mythologized by representatives of that society. It is a precaution to pause and check ourselves in such a mirror. Other professions, such as nursing, have recognized problems associated with false and stereotyped depictions of their members in the popular media (Kalisch, Kalisch & Scobey, 1983). In adult education, Ohliger has compiled a bibliography on "The fictional adult educator," listing sources in popular culture of myths about adult education. He claims that:

Adult education is the invisible sleeping giant of North American society. More dollars and personnel are devoted to it than to all the other areas of education--elementary, secondary and higher--combined. Yet practically the only way the many millions of adult participants have to get an insider's view is through the mass media, especially the fictional media. (Ohliger, 1985, p. 80)

Skilled authors create believable worlds and populate them with characters who seem plausible to the reader. In order to build character, not to mention worlds, a novelist usually spends twenty or more years studying and emulating the art of fiction. The meticulous observation of human behavior which underlies the ability to persuade readers of the truth of fiction warrants the attention of social scientists. It offers to adult educators insights that are hard to

come by from other sources. Its discourses illustrate relationships over time--often, over an entire life--and articulate transformations. In literature, image and behavior are brought to the common denominator of language. This permits analysis not only of snapshot quotations but of cinematic patterns that model process as much as content.

The notion of using literature as a data source has gained adherents from adult education. Merriam (1980), for example, has examined the male mid-life crisis as portrayed in American novels and plays. Quigley (1986) is using a phenomenological approach to study illiterates depicted in Canadian and American literature. These studies, and the broad media-watch activities Ohliger (1980) advocates, assume literature is a mirror for adult education.

The first purpose of this study was to create a schema to classify depictions of adult educators and learners in recent, influential Canadian fiction. The second purpose was to employ the schema to examine the way in which adult education is portrayed in an important Canadian novel.

B. Methodology

The first step was to select a suitable fiction. The handmaid's tale (Atwood, 1985) had won more prizes and public attention both at home and abroad than any other recent work of Canadian literature. Its author, Margaret Atwood, is a prolific poet, novelist, short story writer and critic whose books are best sellers and highly acclaimed by reviewers, academics and literary critics. The handmaid's tale came as close as any serious Canadian novel might to entering the arena of current popular culture; because of the power of its artistry, it had the power to shape as well as reflect opinion. What is more, this novel depicted many examples of adult education. It seemed a logical book to start with.

The style of analysis owed much to Glaser and Strauss (1967); although it has not produced "grounded theory" it has begun a process leading in that direction. After choosing a book, the second step was to give it an initial reading for the global sense of character development, plot, and the nature of the data it had to offer. The third step entailed establishing preliminary categories and a coding schedule for use in labeling portions of the novel that had to do with adult education. The fourth step required slow and attentive re-readings of the entire book to identify, tag and code all references to adult education. In the fifth step, largely concurrent with the fourth, some categories were abandoned and others created as selected quotations were compared with those which came earlier and later in the novel. This process gradually gave rise to insights about larger patterns and concerns appearing in the work; these were noted and checked by constant comparison against the data. Finally, in the sixth step, a preliminary report of the research (this paper) was written to summarize findings and provide a basis for the examination of a further sample of books.

C. Results

The handmaid's tale is a fantasy set during the late twentieth century in a "monotheocracy" called Gilead. It tells the story of a young woman who has undergone a radical, and repressive, process of socialization and who struggles to analyse what has happened to her, what the situation is in Gilead, what she can do to survive and the extent to which rebellion is possible or desirable. After earlier roles as daughter to a feminist, university student, friend,

"other woman," wife, mother, and employee in an audiotape library, the narrator is first stripped of her job, bank account and economic independence, then violently separated from her husband and their five-year old daughter. She is captured by the revolutionary regime, deprived of her name--her freedom, individuality and identity--and sent to the Red Center for training as a handmaid. This is a dehumanizing process conducted by autocratic "Aunts." She is then assigned to service as a peculiar sort of concubine in the home of a childless Commander.

The narrator, referred to as Offred (her Commander's name being Fred), has extremely limited access to conversation, is not allowed to read or write, and spends most of her time in solitary confinement. The regime imposes a variety of ceremonies and rituals on her. It features a very stratified society of women, almost entirely isolated from the parallel society of men. Offred's "tale" is imposed on a frame story, revealed at the end of the book, in which historians have studied her "diary" of thirty tape cassettes, unearthed a hundred years from now in the future.

The handmaid's tale portrays adult education as an agent of change. It runs through an entire catalogue of examples of adult education employed to create change--from formal classroom lectures through colloquia, labs and seminars, to public meetings and processions and ceremonies and demonstrations, to clubs and networks and undergrounds and parties and private mentors, to tours and museums and art galleries and symphonies and newspapers and magazines and radio and audiotapes and videotapes and television shows and movies, to books and board games and jokes and prayers and Bible readings and hymns and popular songs and signs and messages and signals, to personal conversations and forms of love-making, to individual private reflection on dreams and memories and observations.

Learners and settings

Separating one reference to adult education from another, or coming up with a definitive count of their occurrences, was difficult. Relevant passages varied in length from a single sentence to several pages. The longer sections subsumed statements which might, had they occurred in isolation, have warranted a tag. However, there appeared to be (at least) 211 "separate" references to adult education. Given the fuzziness of their boundaries, it seemed wiser to describe their general characters and interactions rather than their discrete characteristics. Most references involved a female educator and a female learner; a smaller proportion involved a male educator and a female learner; rarest of all were examples of a female educator and a male learner. The examples of adult education were distributed fairly evenly between formal, non-formal and informal settings.

Most situations involved compulsory participation, enforced by fear and demonstrations of violence. Learning was the only route to survival; refusing to learn, or to participate in these coercive adult education events, immediately introduced the risk of death. However, two levels of control existed throughout, more or less simultaneously: overt educator control of most educational events, plus covert learner control of the learning. Thus, much adult education in The handmaid's tale could be described as involving self-directed learning although the earlier stages of indoctrination at the Red Centre were motivated by fear, not curiosity. All formal "State" adult education was mandatory; Ohliger (1985) would go further than Taoism in his retreat from this place.

Construction of meaning

An over-riding concern in this novel was the constructing, reconstructing (and mis-constructing) of meaning. Offred tested present-day events against voices, slogans, sayings or stories from her memory. This kept her in a constant process of comparative reflection. Most of the content of the educator-controlled adult education supported the prevailing norms and biases of the culture. Most of the content of Offred's memory contradicted the prevailing values of Gilead. Only when the external--educator-controlled--content came into alignment with her internal content did she assert herself (either in rebelliousness or in resignation).

Since the oppressive socialization process in this novel was designed to control sexual contacts, it was not surprising to find a high proportion of the references linked adult education with sex and sexuality, often in a negative way. Terrible penalties were associated with the breaking of sexual taboos, of which there were many. This connection between sex and adult education was associated with two other dominant patterns in the book--the search for love, and the search for power.

Schema

The references to adult educators and learners were divided into three types and concerned:

1. Faith: information-transfer from a high-authority adult educator to a "vessel" lacking authority. This was a kind of impregnating of the weaker learner, who abdicated from her body and individual needs, offering herself in service to the stronger educator who promised to shelter and protect her if she followed the rules dutifully. In this respect, the novel echoes Freire's notion of "banking." The more powerful system colonized the weaker. Both educator and learner accepted that survival required unquestioning alignment with the norms of the dominant culture.

There is more than one kind of freedom, said Aunt Lydia. Freedom to and freedom from. In the days of anarchy, it was freedom to. Now you are being given freedom from. Don't underrate it. (Atwood, 1985, p. 34)

2. Hope: a desired end activated the learner to scour past, present and imagined futures for ways to reconstruct her knowledge so it was more promising and in line with what she wanted. Here, the student knew her question or object and she employed available sources of adult education in a private process of testing and searching. Authority resided, finally, with the learner. Most examples of adult education in this novel fell into the category of hope.

This is a reconstruction. All of it is a reconstruction. It's a reconstruction now, in my head, as I lie flat on my single bed rehearsing what I should or shouldn't have said, what I should or shouldn't have done, how I should have played it. If I ever get out of here -

Let's stop there. I intend to get out of here. (Atwood, 1985, p. 144)

3. Charity: neither the educator nor the learner was dominant in this mode, but each took the other in as part of their mutual reflection and each exchanged information, interpretations, and experience with the other. There was no last word in this mode, and there were many questions. It was the least secure or protected of the three categories, but it was the kind of education most likely

to result in change. In familiar parlance, it sounded most like "andragogy." It entailed a sort of reflective mentoring.

"We don't have much time left," I say. "Tell me everything."

Moirra shrugs. "What's the point?" she says. But she knows there is a point, so she does. (Atwood, 1985, p. 255)

D. Conclusion

This novel is about the control of everything, including adult education. In this respect it suggests the nightmare that has long preoccupied those who oppose mandatory continuing education. In The handmaid's tale, the controllers constitute an almost invisible elite; thus, there are parallels with the situation conscientization (Freire, 1970) was designed to overcome. The fact that adult education is portrayed in such a brutal and repressive fashion in a significant work of Canadian fiction might not concern us, except that it reflects what is happening in certain regimes all over the world. In particular, the enslaving of handmaids as chattels and surrogate mothers by a patriarchal theocracy should remind feminists that the struggle for equality of human rights is an on-going battle.

Few adult educators have questioned the value of mid-wifing change. Some may cringe at the familiar scalloped diagram in which major societal transformations stammer to a more and more staccato hop along the time-line of their life-span. However, it has been a commonplace attitude within adult education that change is equivalent to "development," which improves the conditions of life in a society. Atwood depicts adult education as an instrument of the oppressors.

The handmaid's tale is a major statement concerning power relationships in adult education and, as such, it ought to be routinely cited by those who seek recourse to more "logico-scientific" writers like Freire, Lovatt or Knowles. The combination of two forms of discourse--"narrative" with what Bruner (1986) calls "paradigmatic"--marries the strengths of the arts with those of science. Literature is not only a mirror for adult education, it is also a mentor, modeling ways of thinking and teaching. Can a more reflective practice, and analysis of the values embedded in our discourses, help us to avoid effects which are neither benign nor beneficial for those we intend to educate?

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PARADIGM APARTMENTS

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NOTE: The following verse is an abstract of the reading I plan to do at the Conference. At that time, I will distribute a chapbook containing the set of poems I have read.

Paradigm:
that hooky little cadence
'the author of this paper' sings to herself
while sauntering past houses labelled
Hermeneutic Heaven,
Logico-Positivistic Lodge,
Critical Theory Gallery.
Sightseeing through a district of mansions
she bites her lip and skips under chestnut trees
full of determined heads in banana-green helmets--
their spikes soft, as if from knowing
ripeness cracks shells.
Something stuck in her mind she has to work out
like repeating a dance step: down,
up, up, lunge, tap, turn--along the sidewalk
to summon the forgotten words
that will let her move it out across the street,
across the park, let her complete this song,
give her clues for the hidden name
of what it is she's found addictive.
 Yes--you know--that's it--yes,
 it must be--yes, then this bit
 fits in between--that's the next line--
 of course. . . .

The hooky little cadence
you thought of while brushing your teeth,
a burr caught in your fancy:
Paradigm Apartments
where the garbage pile for cast-off magazines
is in the laundry room and cockroaches circulate
like other people's subscriptions
kitchen to kitchen, whatever the tenant's status.
Data are the molecules we each breath,
the already warmed oxygen
released by millions of leaves on the avocado tree
growing five stories up
through the airwell. Jack's beanstalk

penetrating clouds so formal they look Tibetan,
but no giant, or compliant giant's wife awaits
the climber at the avocado's crown. No other life.
Only the circuits of analogies
branched out floor by floor,
the rooms of accumulations where tea
is acid in your stomach, or beer burns your cheeks:
oh, glow--you sweet, convicted passionates
on display as examples. Dear Dante,
in your column last week you said,
despite the sentences they bear,
each lover soothsaid truth by ear--
sat at the piano of her own experience
to pick out chords: clumsy melody
that almost got it, that made
the listener's eyes glisten with recognition.
Research only lately became performance art.

This abstract of poetry
reveals process more than product--what
may I recite in thirty minutes
from the harvest of my bedroom
that reflects upon your life--on ours--we adults,
who dance for the exercise at bus stops,
who sing to the snap of closing binders?
All I can give you is my reading
of poems about theory,
parsimony and relevance,
understanding, prediction and control.
Poems about time frames,
and researchable questions,
poems about women taught by men
from textbooks full of he's.
Poems about grounding and deduction.
Poems about computers and advisors.
Poems about families on the fringe of a dissertation.
Poems about men who loved women who loved work.
Poems about women with stage fright,
scared no one will love them when they're cast
as someone else. Paradigms in research:
animated, hooky cadences--
will you let me entertain
a scholarly crew
for a brief portion of your program? Please do.

Resistance in the Professions: Adult Education and the New
Paradigms of Power

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Abstract: A conceptual framework is developed out of the work of resistance theorists which provides new tools for researching the issue of professionalization in adult education.

Background. In 1977, Robert Carlson urged adult education researchers to embark on a search for "viable alternatives to the traditional type of professionalism." It was his contention then that this search would constitute "one of the most important and largely untouched research areas in the field of adult education." Merriam (1977) too saw the professionalism issue as "largely unexamined" in the field of adult education. In the ensuing decade, the question of the professionalization of adult education was vigorously pursued.

Griffith (1980) expressed caution about a rush toward professionalization "if increased status and influence of professional adult educators were coupled with a decreased commitment to serve the learning needs of individual adults and of the society." Rothaus (1981) viewed professionalization as "a mechanism for social control which advocates that educators and learners alike accept grave and extant inequities." Therefore "some adult educators have begun to consider alternatives to professionalization."

Hentschel (1983) called on adult educators to search for "a model of practice that is 'professional' and at the same time consistent with our belief that our clients--adult learners--are valuable contributors to their own learning." This model should "reduce, or even eliminate, the usual distance between the client and the professional."

Cervero (1982) called upon adult educators to "individually and collectively...accept the current model of professionalism or seek to identify the goals and methods of an alternative model." Carol Brown (1984) showed that "support for...a modified professional model is viable among adult educators." She urged adult educators to "develop an occupational model...by sharing power more equally between practitioner and client."

Clearly the assessments of a decade ago that the professionalization issue was "unexamined" and "untouched" are no longer true today. But repeated calls for "modified" or "alternative" professional models have to date failed to lead us anywhere as a field. These calls have been more critical than creative. To invoke the medical model, they have made a diagnosis but have not hypothesized how to restore the patient to health. The

purpose of this study, therefore, was to uncover, within professional practice, alternative modes of professional practice which should be of great interest to adult educators concerned about professionalization.

Conceptual Framework. This research acknowledged with the critical literature in adult education that new models of professional practice are at least theoretically possible, and that adult education, as an emerging profession, may be in a better position to recognize the essentials of such new models than are the more established professions. But rather than dichotomous debate, this research assumed that conflict, not consensus dominates the practice of all professions. This study linked the professionalization literature to a larger vigorous debate in sociology, thereby showing that differences within the field of adult education with regard to the professionalization issue have their parallels in other professional groups. Therefore, the conflict we experience in the field of adult education makes us more like other professions than unlike them.

A conflict perspective on professionalism shifts the researchers attention away from what professionals have in common (characteristics like status, knowledge, education) toward how they use these common characteristics for very different social purposes. Careful attention to these differences did in this research yield alternative paradigms of professional practice which may be of great interest to adult educators concerned about professionalization.

This research demonstrated that these different social purposes constitute more than different ideas about the nature of professionalism. These are paradigmatic differences about the nature of professional power. Perhaps, it was postulated, the search for alternative models of professionalism might productively examine these differences in professional practice. This research examined the practice of the professions in an effort to uncover alternative paradigms within the professions.

The theoretical bridge to the importance of this question was resistance theory. Educational theorists such as Giroux, Willis, and Apple have insisted that social structures such as schools, churches, families, and the workplace are part of social systems in constant process, where conflict, contestation, struggle, and opposition are part of everyday experience, and where the creation of alternative power structures remains a viable option. Resistance theory calls attention to conflict as the source of change; therefore adult educators concerned about social service and social change may be able to replicate resistant modes of professional practice as the field itself continues to professionalize.

Method. The investigation of the complex phenomenon of resistance in the professions required a research design that enabled the researcher to encounter the feelings, perceptions, and perspectives of professionals. The mode of research that was judged to be most appropriate to this process of discovery and articulation was a phenomenological form of philosophical inquiry. Data were collected using the appropriate tools of this unique and rich method of descriptive research.

Participants in the study were selected because they were fully qualified for engagement in the professional practice of law, medicine, ministry, or adult education. Adult educators were included in the sample because of their centrality to the research question of new models of professional practice. Professionals from law, medicine, and ministry were included because of their historical status as the penultimate professions. One claim has been that if resistant practices could be located and described within these classic professions, then surely they would also be found in other professional groups.

A further criterion for selection was that these professionals were substantively engaged in direct service to the poor or in other forms of political action designed to bring about social structural change through education and action. Twenty two professionals were interviewed. These included thirteen women and nine men. Among these were seven persons engaged in ministry, four physicians, six attorneys, and five adult educators.

These individuals were interviewed in an attempt to determine their understandings of the nature of professional practice and the roles and responsibilities of professionals vis-a-vis social change. Interviews were analyzed using steps of phenomenological methodology. Categories descriptive of the phenomenon of resistance in the professions were derived from this process.

Findings and discussion. It was found that participants in this study spoke consistently of a link between professional work and human meaning. They described their work as closely linked to their self-understanding, a reflection of their most deeply held convictions. They spoke of their professional role in relation to ideas of direct love, direct service, and simple charity. But several also spoke of the personal rewards involved in their practice which they characterized as less accessible to more traditional professionals. These two types of responses, one centering on meaning and the other on rewards, often appeared simultaneously. It was concluded that the expressive and the critical, the personal and the political, often coexist among resistant professionals.

Second, it was found that resistant professionals are characterized by their struggles with the professional role. Resistant professionals describe themselves as engaged in a struggle with their own profession with regard to normative traditions developed within the profession. Participants struggle with dominant contemporary manifestations of professional practice and see themselves as creating new models of professional practice. Yet they also see themselves as recovering historical traditions obscured by dominant contemporary modes of practice. Resistant professionals understand themselves to be engaged in a struggle to remain consistent with the original calling of their profession and to critique contemporary deviations from that calling. Many participants specified a further struggle with the stratified class structure of Western capitalism, and see themselves as resisting the professionalism that in part creates and sustains that stratification. Resistant professionals critically assess the assumptions, methods, and means of professional practice and consciously try to alter them.

Third, resistant professionals are identified and characterized by their understanding of the nature of professional power. These professionals spoke repeatedly of shared power, empowerment of clients, of giving power away, and of discovering power in communities. They recognize the unique experiential knowledge of clients as a starting point for new structures of power. Resistant professionals describe their work as service but describe it further as a radically mutual process. They "stand with" rather than "provide for" client needs. Resistant professionals are more likely to work with groups and structures than solely with individuals. Clients play a crucial and reciprocal role in defining issues, posing problems, and surfacing alternative solutions. This active role is a product of the predisposition of resistant professionals toward the unique power, experience, and knowledge which subjugated groups have access to.

Fourth, it was found that resistant professionals are characterized by their commitment to the role of professionals in creating and structuring social change. Participants spoke repeatedly of shaping communal structures and alternative support networks, of structuring collective wisdom and structuring hope. Resistant professionals speak of structuring change through education, policy work, political action, and direct service. They have carried on these activities within the profession and beyond its limitations.

This research developed explicitly some useful theoretical constructs for inquiry into the phenomenon of professionalism. Specifically, it linked the professionalism issue to a substantial literature in the sociology of education, with particular attention to

resistance theory. If resistance theorists are correct, domination and power are not one-way deterministic forces. Resistance theorists call attention to the fascinating fact that the exercising of power not only reproduces existing social relationships, it also produces resistances to these power relationships which can have creative and transformative affects. Since professionalism can be understood in part as a power relationship, it was demonstrated that resistance theory uncovers important and neglected spheres of professional practice which have major theoretical significance.

Dominant understandings of professionalism describe only a part of the phenomenon of professionalism. It was shown that dominant understandings are shaped by assumptions, ideology, and delimitations that obscure and ignore resistant practices. Dominant understandings consign resistant practices to the margins of the professionalism debate, regarding them as extreme, deviant, and statistically insignificant. In this manner, resistance is rendered invisible and its unique knowledge is subjugated.

Resistance theorists, on the other hand, insist that where power is exercised, there is created both the possibility of domination and of contestation. Therefore, theories regarding the uses of power which assume that it is uniform cannot reveal all there is to say about this phenomenon. This research constructed a theoretical framework out of resistance theory that enabled the researcher to locate a phenomenon (resistance in the professions) that would not be seen through a framework constructed out of dominant assumptions. The development of this theoretical framework redirects attention to modes of professional practice dismissed and rendered invisible by dominant modes. The resistance framework facilitates a transformation of perspective which continually examines assumptions and attentively acknowledges marginalized voices. It suggests that theories of professionalism may be most dynamic and most complete when they take into account modes of practice dismissed by dominant ideologies, and that professionalism is a far more complex reality than much of the debate over professionalism has acknowledged.

Implications. This research brings both a critical function and a creative function to the professionalism debate. Resistance theory makes accessible a framework for a hermeneutic of suspicion that challenges accepted axiomatic claims in the professionalization controversy. In documenting the complexity of forms of professionalism and in uncovering in detail the phenomenon of resistance in the professions, this research has rendered dichotomous debate obsolete. Positions on professionalization can be examined for their relation to social theory, sociological assumptions, and ideology. Professional practices

previously taken as normative can hereafter be examined in the context of dominance and hegemonic control. Conversely, resistant professional practices previously dismissed as deviant or trivialized as insignificant can now be contextualized in relation to social transformation and creative possibilities.

Adult educators interested in the professionalism issue will find the critical perspectives of this research to be of theoretical value. The professionalism debate in the field of adult education has tended to be confined to a limited discussion which assumed a single model of professional practice which must be either embraced or rejected. Hentschel (1983) and Carlson (1977) share a search for alternative models which assume a rejection of current models. Brown (1984) locates the development of an alternative model as a future task for adult educators. This research has documented resistant professionalism among current models of professional practice and has shown that the resistant mode of practice is currently accessible within and among the professions.

This research developed a conceptual framework which does provide new conceptual tools for the professionalism debate in the field of adult education. Theories of professionalism which fail to take into account the dynamics of power can now be critically evaluated by adult educators who might otherwise be accepting of their so-called neutrality. Adult educators captive in a single ideology of professionalism will not see the need for new modes of professionalism. Other adult educators who call for new models of professionalization will find an abundance of theoretical models already being lived out, and will come to recognize that theoretical and ideological perspective heavily shade the abilities to frame questions and to discover where to look for such models. Adult educators who take seriously the work of resistance theorists will understand that the search to be undertaken is not one to construct new models out of nothing, but rather to uncover the multiplicity of models already accessible in professional practice. These adult educators will recognize that, although dominated and subordinated by the power dynamics of the hegemonic structures, resistant modes of practice persist, flourish, and can be worked with. In other words, this research has brought a systematic conceptual framework to the debate on professionalism in the field of adult education. Such a framework was previously not accessible to the professionalism debate in adult education.

THE UNIVERSITY OF WYOMING'S ROLE IN THE HISTORICAL DEVELOPMENT OF ADULT EDUCATION IN WYOMING, 1886-1918

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Abstract: This study explores the historical development of adult education at the University of Wyoming. Results show that: adults constituted a large proportion of the student body, special efforts were made to accommodate the needs of adult students, numerous off-campus learning opportunities were created, and faculty members willingly contributed to informal adult education.

STATEMENT OF THE PROBLEM

Several adult education leaders (Long, 1976; Darkenwald, 1976; Selman, 1977) have expressed their concern about the general lack of historical studies in the field. According to Long, investigation was "sorely needed in several periods." Arguing for an expanded view of adult education, Rockhill (1976) draws attention to the fact that "we are yet a long way from even one comprehensive interpretation of our history." She points out that the works of Grattan (1955) and Knowles (1962) continue to be our only important historical guideposts, and stresses the need for good monographic studies which could serve as a basis for the conceptual synthesis of the field. Comments on the lack of sufficient knowledge of adult educators concerning the history of their field are also being heard. (Hentchel & Hilton, (1983). Historical studies have touched on only a few of the many important aspects that need to be explored. (Darkenwald & Merriam, 1982). One of these aspects is the involvement of early American universities with the education of adults. Very little is known about the attitudes of various institutions towards non-traditional students, the degree of their concern and responsiveness towards the specific learning needs of adults, or their philosophies regarding the education of adults. In depth studies of the historical involvement of universities in adult education, both on- and off-campus, could provide a more accurate perspective of the roots and development of the adult education movement in the United States. It may also offer needed insight into some of today's successes and failures.

The purpose of this study was to investigate the history and development of adult education at the University of Wyoming and the University's involvement in the informal education of adults from its inception in 1886 to 1918. Five research questions were posed:

1. Were adult students identified as a specific group on the campus?
2. Were special opportunities created for adults to study on the campus?
3. Did opportunities exist for adults to study off-campus in University sponsored programs?
4. Were provisions made for the continuing education of farmers and ranchers?
5. Was the University involved with the informal education of adults?

For this study adult education was defined as "all the deliberate efforts by which a man or a woman attempt to satisfy their thirst for knowledge, to equip themselves for their responsibilities as citizens and members of society, or to find opportunities for self-expression" (Waller, 1956). As such, adult education was not limited to organized activities such as lecture series, correspondence courses, or

institutes. It also included learning that took place through the reading of newspapers, journals, bulletins, or books, and through the listening to, or the participation in discussions at meetings of clubs and other organizations.

METHODOLOGY

Historical examination of published and unpublished documents over a period of two years was employed to gather information for this research project. Major emphasis was placed on primary sources which were located in the Wyoming State Archives in Cheyenne, the University of Wyoming Archives, the Coe Reference and Documents Department, the Registrar's Office, and Coe Library on the campus of the University of Wyoming.

The main method used in the study was extensive analysis of the Annual Reports of Department Heads, Directors of the Experiment Station, Presidents of the University, Presidents of the Boards of Trustees, and Governors of Wyoming. Documentary sources such as faculty minutes, registrar's records, proceedings of clubs and associations, correspondence of the president's office, scrapbooks of faculty members, library records, circulars, pamphlets, news-paper clippings, and documents from individual collections provided valuable information. A systematic review was done of *University Catalogues*, *Bulletins*, and *Melanges*, the *WYO"s*, the *Wyoming School Journals*, the *Ranchman's Reminders*, and the *Wyoming Farm Bulletins*. Randomly selected territorial, state and local newspapers were examined to determine the degree of existence of social, cultural, and educational activities and to obtain evidence concerning the research problem. Personal interviews were also conducted. Secondary sources were employed mainly to provide evidence regarding the general history of Wyoming.

The study was delimited to the period 1886-1918. March 4, 1886 marks the date on which the Wyoming Legislature officially authorized the establishment of the University of Wyoming. The year 1918 was selected as the conclusion since it coincides with a period that signifies the end and the beginning of specific eras in the historical development of adult education in the United States. Up to 1918 neither Great Britain nor the United States had an organized adult education movement (Cotton, 1968). The end of World War I brought with it a new perspective, and the beginning of the era of modern adult education (Waller, 1956). The most severe limitation for this particular research project was the fact that much of the evidence and data necessary for this study was hidden in boxes of unclassified and unsorted documents. In addition to being time consuming, chances are, in a situation like this, that some sources could have been missed.

SUMMARY OF RESEARCH FINDINGS

1. Social, Economic, and Educational Conditions in Wyoming

Various social, economic, and educational factors influenced the development of adult education in Wyoming. At the close of the eighteenth century the area still lay virtually undiscovered by white Americans. With the building of the Union Pacific Railroad in 1867, however, an influx of settlers took place and several towns came into being alongside the line. Research shows that a large proportion of the early settlers was educated. Coming from a background of intellectual refinement, many of them had definite ideas as far as their cultural environment was concerned (Beard, 1933). Frontier life on farms and ranches was hard. Most of the settlers lived in crudely constructed log or stone homes. With roads little more than trails during

the summer, and usually covered by snow in the winter, few were able to take part in the educational and cultural activities offered in villages and towns. In spite of these difficulties, however, missionaries were amazed at the degree of "culture and refinement" found on isolated farms and ranches (Brady, 1900). Conditions for the people in towns were somewhat better. Cultural groups such as women's clubs, fraternal associations, and literary societies were often established as soon as towns were organized. Apparently no time was wasted to establish churches and schools. Early territorial laws reflect the values people believed in. Women were granted voting rights even though it "startled the world" (Bartlett, 1918), and provisions were made for the education of both children and adults (Commissioner of Education, 1877).

2. A University for the Territory of Wyoming

In 1886 a bill was passed which stated that: "A university building, . . . shall be erected in or near the City of Laramie in this Territory at a cost not exceeding the sum of fifty thousand dollars." General administration of the University was entrusted to a board of seven trustees who offered the presidency to ex-Governor Hoyt and appointed John D. Conley, Aven Nelson and William I. Smith as first faculty members. Justus F. Soule, Elizabeth Arnold, and A. M. Sawen, were later added to the teaching staff and during the months of July and August the first *Circular of General Information* was compiled. When the University opened its doors on September 6, 1887, 37 students enrolled. Their ages ranged from 12 to 23, two of whom were of collegiate rank. A total of 72 students enrolled during the 1887-1888 school year. Of this number, 16 were at the collegiate level and 56 were in the preparatory grades. Noteworthy is the fact that of the 16 collegiate level students 11 were adults. According to Grace Hebard, Secretary of the Board of Trustees, they were "wives of townspeople mostly," who had signed up for "special courses." It thus appears that the University of Wyoming started out with more than twice as many adult students than regular, so-called, traditional students!

Although the work at the University began with much enthusiasm and great expectations, records show that the pioneer years were difficult. Faculty minutes often refer to the disorderliness of younger students in the preparatory department, and the struggle of instructors with inadequate equipment. It was reported that a small but able faculty performed not only the duties "properly belonging to their respective chairs, but cheerfully accepted extra burdens when important to the general success of the institution."

3. Adults: An Important Part of the Regular Student Body

A systematic review of the Permanent Record Cards File shows that adults formed a large proportion of the college level student body during the period under review. Identified by the founding fathers of the University as a particular group of "mature" individuals with specific learning needs, they came to the university to add to their past education, increase their occupational skills, or broaden their present life experiences.

4. Special Provisions for "Special Students"

It was found that adult education at the University of Wyoming did not develop as an afterthought. Recognizing the fact that older individuals had different needs, special provisions for adults regarding admission requirements, and the choice of independent courses were announced in the first *Circular of General Information*. This went out to the public before the University had officially opened its doors in 1887. Referred to as students of "mature years," persons who had "attained their majority," or students of an "advanced age," adults taking independent courses were

classified as "Special Students." The difference in policy regarding older and younger students was emphasized in the 1911 *Melange* :

In all Colleges and Schools of the University, students of *mature* years are permitted to pursue, under the direction of the faculty one or two special lines of study. Such students may be admitted without examination, and are classified as *special students*. Young and immature and dilatory students, however, will not be permitted to use this classification as an excuse to avoid presenting the requisite number of preparatory units.

Individual needs of adults apparently formed the basis upon which educational programs and opportunities for older students were built. Records (1889) show that several courses, "quite outside the instruction ordinarily furnished" were devised to "subserve the practical uses of life".

5. Additional Efforts to Stimulate Intellectual Growth

It was reported that a "literary atmosphere pervaded the institution" during the early years. Well-equipped libraries and museums were open to students as well as to the community. Informal adult education was provided through Special Lectures, Lyceum Course Series, frequently held literary and historical meetings, and through a variety of programs offered by the music, art, photography and sports clubs.

6. Opportunities to Study Off-Campus

Bulletins indicate that very definite attempts were made to encourage continuing adult education. At an early date opportunities for adults to study off-campus were created. Concerned with the education of individuals living in remote areas, the Wyoming University Extension Association was organized in 1891. Extension centers were established in several towns alongside the railroad. Faculty members offered unit courses in a variety of subjects at these locations. Much of this work was done during summer vacations. When it became clear that the scattered population and the long distances to travel prohibited the creation of extension centers in many of the remote towns, a correspondence department was organized. Initially it was slow in developing, but growth accelerated in 1914 and by 1918 records indicated a total of 239 students enrolled in various correspondence courses.

7. Summer School

In 1904 the need for the establishment of a summer term became evident when a large number of teachers, unable to leave their classrooms, expressed their desire to use the summer vacation to further their education. The University complied with the request and in 1905 the first summer school was in session with 27 adults attending. The next year 46 students signed up and in 1907, the *Wyoming School Journal* predicted that Summer School was to become "a means of grace" to an increasing number of Wyoming adults. Contrary to the correspondence department, the summer school idea flourished from the beginning and by 1918 it had 261 students enrolled. Records show that persons from all walks of life attended: business men, clerks, newspaper men and women, farmers, miners, prospectors, ministers, house wives, stenographers, and bookkeepers. Apparently it was "meeting a real educational need."

University catalogues indicate that the total number of summer school, extension center, and correspondence students at the end of the period under review, came to 553 as opposed to a total in-resident student body of 372 students. These

figures serve to emphasize the significance of general extension in the development of adult education at the University.

8. The University Goes to the Farmer and the Rancher

Farmers and ranchers of Wyoming constituted a group of adults with very specific educational needs. Many of the early homesteaders were former teachers, railroad employees, laborers, businessmen, lawyers, or ministers who knew little about farming in the West. The first step in the University's agricultural education plan was to establish an Experiment Station. Since Wyoming was a pioneering state, agricultural knowledge regarding farming and ranching under Wyoming conditions did not exist. Needed knowledge had to be "created" through research and experimentation before it could be carried out to the farmers and ranchers of the State.

a) Education by Mail: Similar to what the organizers of University Extension Centers had discovered, agricultural instructors found that the spread-out nature of the population and the vast distances to travel left them no choice but to resort to the mail service in order to reach adults living in remote areas. As results of research became available, it was distributed by way of Bulletins, and a monthly journal, called the *Ranchman's Reminder*. Later named the *Wyoming Farm Bulletin*, it reached an estimated circulation of 11,500 by 1913.

b) Short Courses: An important step in the dissemination of agricultural knowledge was taken in 1904 when a short course was offered for "the benefit of ranchmen and farmers who were unable to be in residence at the university." A total of 130 adults attended.

c) Farmers' Institutes: Governor Brooks, who saw the potential of concentrated learning sessions for rural adults, recommended that the short course "be put on wheels," so that more people could benefit from it. This resulted in an appropriation of \$2,000 being made the next year for farmers' institutes to be held in different sections of the State. The first institute, offered under the new law, took place in Cody on March 29-31, 1905. During the next year a series of institutes were conducted by Professors Buffum, Morton and Nelson. According to the *Ranchman's Reminder*, the three men traveled more than 400 miles by stage and wagon, and 1,000 miles by rail. They managed to survive "four-horse run-aways, wrecks, tip-overs, hostile people, blizzards, forty mile rides with the temperature below zero, Indian cookery and horse meat." An eight-week Winter Course for persons who wanted to utilize the "slack season" on their ranches and farms was also introduced as part of the on-campus opportunities for adults during that year. In 1907 the first lecture for women at a farmers' institute was presented. This marked the beginning of the "family approach" in extension work in Wyoming.

d) Movable Schools of Agriculture: Several variations on the farming institute theme were used by the University to further its educational efforts. In 1909 a plan was announced to conduct, for a week or more, a short school of agriculture in some of the larger agricultural centers in Wyoming. By bringing the school to the adults, rather than expecting them to come to the school, the University was hoping to improve its services to adult learners. The first three such movable schools of agriculture had a total attendance of 2,125.

e) The Institute Train: The institute train was another variation. Equipped with exhibits, machinery, farm and domestic science equipment, speakers, and instructors an educational train was sent out into the State in 1909. The *Ranchman's Special*, as it was called, traveled for four days through central Wyoming. Short talks were given to people as they passed through the cars to look at the exhibits, and at two or three places educational meetings were held in the towns during the evening. Approximately 3,700 persons visited the train.

f) State and County Fairs: Believing that competitions, exhibits, and demonstrations stimulate an interest in improved production, the University became heavily involved with the educational aspects of State and County fairs. At these fairs faculty members lectured to farmers and ranchers in regard to agricultural problems, gave demonstrations, organized exhibits, and judged animals and produce for quality and value.

g) Demonstration Farms: During the 1910's several demonstration farms were also established. Under the guidance of experts of the University owners on these farms attempted to grow the largest possible crops at the least expense. Successful projects then served as examples to other farmers.

h) Adult Education Through Cooperative Extension: Extension work was growing throughout the United States at the turn of the century and from time to time federal appropriations were made to supplement state funding of agricultural adult education. In 1912 a Memorandum of Agreement was drawn up between the Bureau of Plant Industry and the University of Wyoming College of Agriculture. That made provision for the conducting of cooperative farm management studies, the offering of field demonstrations, and the appointment of state leaders and county agents. Further impetus was given to the program with the passing of the 1914 Smith-Lever Act which provided federal money for states and territories to conduct cooperative extension work in agriculture and home economics. By the end of the period under review, President Nelson was able to report that the educational effort, as exerted by cooperative extension work, had been growing in magnitude and importance in Wyoming.

9. The University's Role in Informal Adult Education

In addition to its role in the formal education of adults on its campus, in remote towns and villages, and on the farms and ranches of Wyoming, the University contributed a great deal towards the informal education of adults. As members and leaders of various social clubs, fraternal organizations, literary societies, women's clubs, professional associations, church groups, and commercial clubs both faculties and Boards of Trustees made important contributions. Educational activities were incorporated in the regular programs of most of these institutions as a coordinate function paralleling other purposes such as community service, recreation, or professional development. Evidence found in newspaper files, private collections, and scrapbooks suggests that major roles were played in the educational activities of at least two literary societies, and two women's clubs during the period under review.

Faculty members also made noteworthy contributions in a semi-official capacity. As invited speakers or lecturers to teachers institutes, they were heavily involved with the professional development of Wyoming teachers. A number of them also provided educational information to the public through the writing of book reviews and popular-scientific articles for local and state newspapers. A traveling library system saw to it that adults in remote areas were not deprived of reading materials.

CONCLUSIONS AND RECOMMENDATIONS

This study provides a more accurate perspective of the roots of adult education at the University of Wyoming. Findings suggest that the University was extensively involved in the education of adults during the period under review. A situation approach was adopted in its philosophy regarding older students. Faculty minutes, correspondence, and catalogues bear testimony to its efforts to accommodate adult students and to provide special courses to fit their specific needs. An important role was played in helping pioneers in their struggle to survive, both physically and culturally. Through extension classes, correspondence courses, and summer schools

adults living in remote areas were able to learn about the "Anglo Saxon" civilization, listen to the poetry of the Elizabethan age, read Robert Manning, study French and German Literature, or listen to a Beethoven sonata. Thousands of farmers and ranchers, who knew very little about western farming conditions, were taught how to raise livestock and crops on a profitable basis, while their wives received instruction in household management. With the help of the University railroad workers, typists, stenographers, miners, ministers, and surveyors learned to improve their skills, and through Lyceum courses early Wyoming adults were brought into contact with the ideas and personalities of great speakers and scholars of their time. The large number of students involved in special courses during the early years, and the prominence given in catalogues to special students, correspondence courses, summer school curricula, agricultural short courses, and farmers' institutes suggest that the term non-traditional does not apply to adult students on the campus of the University of Wyoming. It appears that the concept of continuing education was a reality in early planning procedures, and that decision makers were well aware of the fact that a changing society required knowledge to be updated.

Further research is needed to examine the history of adult education at other universities so that a comprehensive picture may be gained of the role of the American university in providing educational opportunities for adults during earlier years. Considering the fact that by 1992 the proportion of college students younger than age 25 will drop to 51.3 percent and full-time students to 52.1 percent (National Center of Education Statistics) it may be wise to investigate past university experiences from which we may learn. The education of adults at universities, both on- and off-campus, remains an important sub-division of the total field of adult education. Its history needs to be explored in order to envision adult education as a phenomenon in its totality.

REFERENCES: A complete reference list is available from Johanna Nel, 313 McWhinnie Hall, University of Wyoming, Laramie, Wyoming 82071.

RESEARCH TOOL DEVELOPMENT
THE ORGANIZATIONAL TRAINING SUPPORT INVENTORY

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Abstract: The purpose of this study was to develop an analytical management tool for measuring levels of organizational support for training. Using the Delphi Technique, a group of 93 consensus participants were requested to generate questions that would be used in structuring an inventory instrument for measuring organizational support for training.

Statement of the problem: Extensive review of related literature and broad inquiry of HRD (Human Resource Development) professionals in the field produced no evidence that instrumentation for determination of organizational support for training was readily available. Inquiry to the practitioners resulted in general agreement as to the need for quantitative tools for determining levels and kinds of support for training that exists within organizations. With the development of this instrument, it is anticipated that dominant profiles of support will be identified for various types of organizations, and that appropriate techniques may evolve to enhance various aspects of support.

Methodology: The purpose of this research was to develop a model instrument for use in measuring levels of organizational support for training programs. The Delphi Technique was selected as the method of choice for obtaining a consensus of opinion from well informed participants. This process was developed by the Rand Corporation as a reliable method of achieving consensus goals. This study avoided face-to-face contact, a feature that is necessary when using the Delphi Technique.

Through the Delphi process, these researchers sought to attain a converged opinion of recognized experts concerning the items that should be included in an instrument designed to test or measure levels of management support for training programs. Effort also was made to identify who would be appropriate respondents for each item: managers and supervisors, training directors, trainees, or executive level officers.

Overview of development process: Because the Delphi process used in this study was somewhat complex, an effort to bring clarity was provided in the following outline of seven distinct activity steps in this research project.

Step 1

Thirty-five board members of the American Society for Training and Development (ASTD) were selected and requested to assist in identifying a respondent group for this study. This effort produced 30 recommended potential respondents. Each person had to have been a member of at least one of the various boards of the American Society for Training and Development and had to have been either a titled officer in the board to which he or she belonged, or an active practitioner in human resource development.

Step 2

Each of the 30 human resource development professionals identified in step one were subsequently requested to recommend five or more human resource development professionals to participate in this study. This effort produced 63 referrals which, when added to the original 30 identified in step one, provided 93 potential respondents.

Step 3

Round One Instrument Structure: 93 potential respondents were asked to provide questions for the development of the instrument. The mailing for Round One was developed and mailed November 25, 1985. The first inquiry to consensus participants was an open-ended request which specifically asked respondents to generate questions that they believe would be helpful in identifying organizational support for training. In addition, respondents were requested to structure questions (instrument items) as they would be presented to persons from diverse areas within the organization. Thirty-three respondents indicated willingness to continue in the next two rounds of the review. The first round produced 314 root items which were refined to 244 items comprising 35 typed pages.

Each root question was checked against the other in order to identify and delete redundant and unrelated questions, hence the reduction came to 244 items. Groups of the questions that shared commonalities were put together. After this grouping, related questions were then structured and synthesized into a single integrating question that attempted to capture the essence of each group of related questions. This effort resulted in the reduction of the 244 items into 59 condensed or synthesized questions. The reduction came about by careful elimination of item questions that were clearly redundant or were not related to the issue of developing an analytical instrument.

Step 4

Round Two Instrument Structure: The process of analysis and consolidation at this stage was achieved by structuring and classifying the root questions according to their relatedness to each other. The group of questions were synthesized and structured for more clarity. For each group of related questions, a single synthesized question which attempted to capture their essence was produced. Each question and group of questions respectively, were checked against the others to eliminate redundant and unrelated items. As a result of this examination, the 314 root questions were at first reduced to 244 items and after consolidation, 59 condensed or synthesized questions were finally produced.

The root items and 59 synthesized questions developed in Round One were presented in a twelve page booklet in which respondents were requested to indicate whether they agreed upon the synthesized statement, and to indicate the level of importance of the questions as high, medium, or low. Of the 33 respondents sent the materials in Round Two, 23 responded.

Step 5

At the recommendation of one particularly well-informed respondent, the researchers implemented the services of a panel of seven human resource

development experts at the University to further refine and classify the responses to Round Two.

Specifically, this committee was requested to identify the most appropriate respondent(s) for each question. The appropriate respondents included trainees, managers or supervisors, training directors, and executive level officers. For each item, one or more appropriate respondent groups were identified as the most likely to provide the data required. This committee was also requested to indicate the nature of support indicated by each item as structural, behavioral, or perceptual.

Step 6

Round Three Instrument Structure: The instrument items developed at this stage and reviewed by the panel of human resource development experts at this stage formed the basis for Round Three. Identified at the left of each instrument item were symbols for the most appropriate respondents - trainees, managers or supervisors, training directors, and executive level officers. Identified on the right was the nature of support as perceptual, behavioral, or structural. To the extreme left of each item for Round Three were weighted ratings set in brackets to indicate the relative importance of each item.

The ratings were arrived at for each item by using a rank-weighted method specifically for this purpose. The rank-weighted method operates by assigning points to the level or degree of importance of each item, one point for low, 2 points for medium and 3 points for high. An average response for each item was calculated using these values.

In Round Three, each respondent was requested to indicate their agreement of the appropriateness of each item, the designated respondent(s), and the nature of support. They were also requested to identify any factors in which they dissented from the group consensus.

Step 7

Responses from Round Three resulted in small revisions and provided the basis for structuring four instrument forms, one for each of the appropriate respondent groups. One of the item questions was discovered to be a duplication and was deleted, reducing the total items to 58. Several of the items were included in more than one of the four instrument forms.

Description of the data: Because the purpose of this study was to develop an instrument for use in measuring levels of organization support for training, and not the collection and treatment of data, there is nothing to report in the traditional sense of data description. The researchers are at the present time experimenting with various ways that instrument results may be presented to make it most helpful to practitioners and decision makers. The most helpful format seems to be the structuring of response profiles for each item.

Conclusions: The continued participation of 23 respondents in a complex and demanding process of group consensus was the basis for these researchers to conclude that there is, in fact, a real need for the Organizational Training Support Inventory, and that the instrument at this stage is ready for use in establishing base reference data in several types of organizations. It is recognized, however, that this instrument is at an embryonic stage of

development, and that there likely will be need for further refinement as it is used in a variety of types of organizations. It is suggested that organizations use the instrument and collect empirical data which would help validate it for decision making purposes affecting the quality of training programs.

OBTAINING RESEARCH OBJECTIVITY THROUGH QUALITATIVE
APPROACHES: AN ARGUMENT FOR VALIDITY

Robert E. Nolan
Robert C. Mason

ABSTRACT

This paper demonstrates the advantages of combining case study and survey methods to enhance the validity and utility of impact studies when the initial parameters are broad and undefined.

STATEMENT OF THE PROBLEM

The debate over the merits of qualitative versus quantitative strategies continues. Rosenblatt (1981) remembers his mentor, Donald Stanley, eschewing qualitative methods such as the case study. Case studies, according to Stanley, are especially vulnerable to researcher self-deception. He also described the case study method as having a low "signal to noise ratio." In academic parlance qualitative approaches produce data described as "soft" although "deep;" whereas, quantitative approaches yield data that is "hard," although narrowly focused, or "thin." What must the researcher do whose charge is to produce data to ground important policy decisions? He or she should ideally produce data that is both "thick" and "hard."

METHODOLOGY

The object of this enquiry was to measure the impact of 40 Illinois Area Planning Councils for Adult Education. The Planning Councils were established by state law in 1982 to enhance the planning and coordination of adult education programming throughout the state. The Planning Councils were heterogeneous due to their widely varying contexts--some were in densely populated areas; others were located in sparsely populated rural communities. They shared a single commonality of being organized around community college districts. Hence, selecting sites for case studies provided a vexing problem. Eighty per cent of the population of Illinois resides within the northern 1/3 of the state. Some method had to be devised to insure equal representation through a stratification which could be weighted to reflect the population distribution of the state. This was done by stratifying the entire population into four strata that reflected population density, location and type of planning council. From each strata two sites were selected randomly.

An open-ended field guide for collecting data for the case studies was formulated by the research team who then pilot tested it at a site not included in the stratified random sample. Various changes were made, the major one being to change its form from that of open-ended questions to a word or phrase topical outline. The latter format gave the researchers more freedom to ask questions that might be specific to the site. All interviews were conducted on-site and lasted from one to two hours. Site visits included tours of the facilities, observations of Planning Council meetings, and review of documents and minutes of past meetings. The research team that participated in the pilot study then met to discuss the merits of the field guide, to evaluate the quality of the information gathered, and to do the

initial analysis. Interview data was analyzed by each team member's identification of a theme or issue on a simple grid. The issue then had to be supported by observations made by each of the four researchers. Issues supported by observations made by each member of the research team went into a case study which was then written up into a six page summary and sent to the officers of the Planning Council for review and comment.

Observations made by the researchers who attended Planning Council meetings and who interviewed those thought to be principal players or "stakeholders" produced recurring themes. When these themes recurred over seven sites they became the major patterns of the study. Five major patterns or categories emerged from the seven sites studied. Each of these categories was then used to generate questions for a follow-up mail survey. The mail survey was intended to validate the case study data rather than produce additional data to be statistically analyzed. It was first pilot tested on the same thirty respondents who participated in the pilot case study. The survey was then sent to the entire population under consideration--364 members of Area Planning Councils in Illinois. A single mailing with follow-up phone calls brought a return of 139 completed surveys and 11 blank ones. This rate of return would have been totally unacceptable in normal survey research. However, according to the methodology used, the return rate became part of the data itself as will be seen.

DESCRIPTION OF THE DATA

1. The Function of the Planning Councils Turned Out to be One of Coordination and Information Sharing Rather than Planning.

Although Planning Councils were viewed as helpful to the delivery of adult education services, the process was described as being more a "forum" for information dissemination than a forum for true debate leading to decisions affecting programming. Tables 1 and 2 summarize answers to open-ended questions.

Table 1

Primary Responsibility of the APC N = 139

Program Coordination	31.2%
Program Planning	15.8
Other	13.7
Approval for Funding	12.9

Table 2

Primary Contribution of the APC N = 139

No Response	46.0%
Information Sharing	16.5
Program Coordination	11.5
Other	11.5

Table 3

Specific Benefits Received from the APC
N = 139

Receiving Information	70.6%
Maintaining Institutional Relations	67.5
Coordination of Local Programming	63.5
Planning of Local Programming	61.9

2. Membership of the Planning Councils was a Key Factor in Their Functioning.

The issue of membership emerged as a principal category during the case study phase of the enquiry. Various data sources converged on this issue. School superintendents had very poor attendance in the randomly selected sites. Even though school superintendents made up the majority of the members of the Planning Councils, statements they made during the interviews called into question their commitment to adult education and the degree to which they should be considered true "stakeholders." Although membership on the Councils was dictated by state statute, interviewers readily perceived that not all such "official" members had a vested interest in adult education for which the Councils were instituted. It was the purpose of the case study phase of the enquiry, it must be noted, to identify and interview the true stakeholders. The response rate of the mail survey was mentioned above as being an important part of the data collection. The overall response rate to the mail survey was 38.1%. For public school superintendents who made up the majority of Planning Council members, the response rate was 16%. On the other hand, program directors, who would be expected to have a strong vested interest although they were only 19% of the population surveyed, had a response rate of 62%.

Table 4

Actual Responses over Expected Responses

	Program Directors	School Superintendents
Actual Responses	49	36
Expected Responses	69	218
Response Rate	62%	16%

Had the case studies not been conducted in conjunction with the mail survey, there would have been no way to understand the low response rate of the school superintendents. When the low response rate is combined with interview data and observations made in the field, however, the response rate becomes part of the converging data that makes the question of membership such an important theme.

3. Community Based Organizations and Supporting Agencies were not Perceived to be Adequately Represented on the Councils.

While public school superintendents showed lukewarm interest in the Area Planning Councils, CBO's appeared very interested. School superintendents saw

no use in attending meetings that did not generate money for their K-12 systems. On the other hand, because CBO delegates represented potential participants in adult education, they felt that their attendance at meetings might someday bring funding their way.

The case study phase of the project identified a perception among CBO's and allied agencies of being excluded from the planning process. This perception was confirmed by the mail survey which described "official" members as insensitive to possible changes in membership.

4. Additional Administrative Effort was not Required to Operate the Planning Councils.

The concern of additional administrative effort was raised during the case study phase of the enquiry. Time and money required to conduct planning meetings and to document the proceedings had to be contributed by the participants themselves. The complaint about extra time and money came up repeatedly among those interviewed. To confirm this perception from the case studies, the mail survey contained questions about the degree of administrative effort required translated into measurable items such as secretarial time, travel, xeroxing and added clock hours. This concern was not confirmed by the survey data.

Table 5

Increase in Administrative Effort

Have your administrative responsibilities	48.9%	increased?
	46.0%	remained the same?

When the question of administrative effort was translated into specific categories the picture of professional effort changes. More than half did not answer the questions addressed in specific categories; while those that did, reported miniscule percentages of time and budget.

CONCLUSIONS

Conducting a case study across sites was a valid method for generating categories to analyze organizational effectiveness. The mail survey, rather than providing additional data or redundant data, provided an additional perspective on the same data under consideration in the case study, and, in fact, provided another dimension in the triangulation of evidence.



Figure 1. Survey as an Additional Dimension

The method was effective in bringing to the surface operational issues rather than political issues. Politically, for example, public school superintendents were designated integral members of the Area Planning Councils for adult education by legislative action. However, they were not the true stakeholders, as the study demonstrated. The category of council membership itself was generated from the case study rather than the RFP of the funding agency. It was seen that combining the case study approach and its in-depth, field based perspective with a mail survey yielded results that are both "thick" and "hard," yet useful, feasible and accurate. Furthermore, the recommendations of this enquiry were quickly endorsed and implemented due to the continuous involvement of major decision makers and an advisory group representing the various Illinois stakeholders in adult education.

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THE EFFECT OF EDUCATIONAL STRATEGIES ON EMPLOYEES' HEALTH: AN EXPERIMENTAL STUDY IN THE WORKPLACE

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Abstract: This study demonstrated that adult educators, using multiple strategies, could achieve positive lifestyle changes in employees who participated in a workplace health promotion program. The effect of health promotion interventions that were primarily educational and environmental were modified by individual attitudes, perceptions, beliefs and interests.

Introduction

The corporate world has recently begun to focus on health education as a long term strategy to increase the health of employees and to reduce the future cost of health care benefits. In 1982, employers paid more than \$67 billion for employee health benefits, an increase of more than 500 percent since 1975 (National Center for Health Statistics, 1984). Since employees spend a significant amount of their time in the work environment, the workplace is an ideal site for adult educators to develop healthy lifestyle programs - programs commonly referred to as wellness or health promotion programs. The concept of self-care is consistent with the adult educator's goal of enhancing the autonomy of individuals by providing them with knowledge and skills necessary to make decisions about their wellbeing. The societal trend toward the recognition of the capacity of individuals' to effect their own health is what Naisbitt (1982) called the "new health paradigm" in America.

The changing patterns of disease in the United States during this century have given impetus to a shift in emphasis from treatment of illness to the prevention of disease and promotion of health. The increasing prevalence of chronic degenerative diseases, coupled with rising health care costs, have engendered a renewed public interest in prevention, the catch-word of the day (Ng, & Davis, 1981). Research into the relationships between lifestyles and the incidence of disease has identified lifestyle related risk factors associated with the three most common diseases - heart disease, cancer and stroke. High blood cholesterol and lack of physical exercise are two risk factors associated with coronary heart disease, the cause of over 550,000 deaths in the United States each year (National Institutes of Health, 1985).

Purpose

The first purpose of this study was to determine the impact of a diet and exercise program on employees' health practices, attitudes of satisfaction, health beliefs, and physiological status. The physiological measures that were investigated were those that have been shown to be particularly related to exercise and dietary practices and associated with the risk of coronary heart disease. The second purpose was to explore the relationships between sociodemographic variables, perceptual variables, health practices and physiological status and to identify variables that are predictive of changes in health status.

Methodology

An experimental research design was used to address the following hypotheses:

1. Employees who receive education and health promotion interventions will make significant changes in their dietary and exercise practices, physiological measures and attitudes.

2. Employees within the experimental company who receive intensive educational interventions will demonstrate more changes in their dietary and exercise practices, physiological measures and attitudes than employees who receive intermediate or mild interventions.

3. Employees receiving the mild intervention in the experimental company will change their health habits and attitudes more than employees within the control company.

4. Employees who change their health habits and physiological status will differ in their perceptions, beliefs, and satisfactions with health from employees who do not change.

5. Clusters of variables can be identified that will predict (partially) change that occur in employees' health practices and physiological status.

Subjects

The subjects for this study were volunteers from two companies in the upper-midwest. At the time the pre-intervention data were collected, the experimental company employed 266 people. The majority of the employees were young, high-school educated men who were hired with little prior experience and trained on-the-job for production, technical and sales positions. Ninety-three percent (n=237) of the employees responded to the initial Lifegain Survey. Of the 167 who volunteered to participate in the 12 week intervention program, 90 were randomly assigned to the three intervention groups. The follow-up survey one year later was sent to 262 employees and was returned by 177 for a 65 percent response rate.

The control company was located approximately 90 miles from the experimental company and at the time of the pre-intervention survey employed 536 people. Sixty-four percent (n=343) of the employees responded to the survey. The majority of the respondents were high-school educated, over 60 percent were below the age of 40 and 52 percent were male. The follow-up survey was sent one year later to 502 employees and was returned by 268 for a response rate of 53 percent.

Instrumentation

The Lifegain Health Practices Survey and Organizational Support Indicator, instruments developed for workplace wellness programs by Allen (1981), were used to survey the employees in the two companies at one year intervals. The questions formed four scales: health practices, satisfaction with health practices, organizational support, and program interests. The surveys had face and content validity. The reliability coefficients for stability and internal consistency for the four scales ranged from .72 to .97.

The Multidimensional Health Locus of Control, developed by K.A. Wallston and associates (1978), has been suggested as a good tool for providing direction for health education programs. It consists of three scales: internal, chance, and powerful other health locus of control. The higher the score on the internal sub-scale, the more personal control individuals

believe that they exercise over their own health. The alpha reliabilities reported for these scales ranged from .83 to .86.

The physiological tests (eg. blood pressure, heart rate, exercise stress test), anthropomorphic measurements (eg. height, weight, percent of body fat), and laboratory tests (eg. cholesterol, glucose, triglycerides) were collected using standardized procedures, by a board certified family practice physician and a certified adult nurse practitioner in the company exercise facility.

Intervention Program

The intervention program was designed to test the degree of intervention needed to produce the desired lifestyle changes among the blue collar employees in a plant in the upper-midwest. The 30 employees assigned to the mild intervention group received the intervention available to all of the employees in the experimental company and required a minimal amount of staff involvement. They attended an all day educational seminar sponsored by the company that included a persuasive illustrated session on the health risks associated with lack of exercise and high fat diets. The employees were given snacks and lunch that were designed to introduce them to a diet low in fat, cholesterol, salt, sugar and caffeine that was available to the employees in the workplace cafeteria. This group also received blood tests with a written interpretation of their significance. During the three month intervention program all of the employees received a monthly newsletter that stressed the importance of exercise and nutrition.

The 30 volunteers randomly assigned to the intermediate group, in addition to the interventions above, received a group interpretation of their laboratory results, a physical examination and a treadmill exercise test. They had access to the exercise facility and were given some general exercise guidelines but did not require extensive staff involvement. They were not included in any aerobics classes or special exercise events.

The 30 volunteers randomly assigned to the intervention group requiring most intensive staff involvement, in addition to all of the interventions delivered to the other groups, received an individual explanation of their laboratory tests and an individual exercise prescription based on the results of their treadmill exercise test and their physical examination. They were assisted in implementing their exercise program and were encouraged to participate in organized, supervised, aerobic exercises as well as being encouraged to participate in a wide range of non-supervised activities. In addition, the employees in this group were provided with a free daily low-fat meal from the cafeteria and recipe books, samples of products available in local stores used in the recipes and instructions for eating in restaurants.

Data Analysis

The data were analyzed using descriptive and inferential statistics available in SPSS. An alpha of .05 was established to test for significance. Pre- and post-intervention group means were compared using t-tests for the three groups in the experimental company. Analysis of covariance, using the pre-intervention scores as the covariate, was used to test for a significance difference among groups. Correlations were used to test the

relationships among self reported practices and physiological measures and the associations between health practices, satisfaction with health practices and health beliefs. Finally multiple regression analyses were used to identify the dependent variables that were the most powerful predictors of change in health practices and physiological status.

Results

Consistent with Hypothesis 1 employees who received educational interventions made significant changes in their health practices, physiological status and attitudes. Positive changes occurred during the intervention program in all three of the intervention groups.

Employees requiring the most intensive staff involvement reported a significant increase in restricting their fat, salt, sugar and caffeine intake ($t(23)=-2.53, p=.02$) and balancing their caloric intake with their energy expenditure ($t(21)=-3.18, p=.005$). Consistent with these habit changes, the post-intervention mean for serum cholesterol (182.0) was significantly lower after the program ($t(29)=2.21, p=.04$), a drop of 15mg/dL. There was a change in mean weight of almost eight pounds and a drop in percent of body fat of over five points - both statistically significant at the .001 level. There was also a significant drop in blood glucose ($t(29)=4.88, p=.000$), a decrease of nine points in mean resting heart rate ($t(23)=2.87, p=.009$) and an increase in flexibility ($t(23)=0.14, p=.01$).

Employees with an intermediate level of staff involvement did not report significant changes in their dietary pattern or their total cholesterol. However, they reported a substantial number of changes in their physical fitness variables. They reported a better balance between their caloric intake and energy expenditures ($t(16)=-3.79, p=.002$). They also demonstrated a congruent increase of 55.5 seconds in their mean treadmill termination time ($t(16)=-2.86, p=.01$) and a statistically significant increase in their flexibility mean ($t(14)=-3.30, p=.05$). This group also showed a significant mean increase in the component of blood cholesterol-the HDL--that has been reported to increase with exercise ($t(19)=2.83, p=.01$) and a significant decrease in percent of body fat ($t(13)=2.79, p=.02$).

The minimal intervention group reported a significant decrease in the number of pounds overweight ($t(23)=-2.94, p=.007$) with congruent decreases in the triglyceride mean value ($t(21)=2.15, p=.04$) and the blood glucose mean ($t(21)=-2.925, p=.008$) and an 11.6mg/dL or 6 percent drop in their cholesterol level.

In the intensive intervention group, the employees' means for satisfaction with current health practices, satisfaction with exercise practices, and satisfaction with weight control increased significantly after the program. The mean scores for perception of organizational support for maintaining fitness increased significantly at the .01 level for the intensive and mild intervention groups.

Contrary to Hypothesis 2, differences were generally not found between the groups using analysis of covariance, with the pre-intervention score as the covariate. The data indicated that the additional resources generally did not produce significantly greater results. All three of the

groups perceived high organizational support for health, but there was not a significant difference among the groups using analysis of covariance.

Although changes in society might explain the changes that occurred without treatment, comparisons between the pre- and post-means of the experimental company and the control company suggested that employees in the experimental company increased their exercise practices and limited fat, salt, sugar, and caffeine more than the control company. Likewise, employees in the experimental company were more satisfied with organizational support for regular exercise, weight control, understanding nutrition, maintaining physical fitness, and maintaining personal health ($p=.001$) than employees in the control company. Thus, the data supported Hypothesis 3.

The relationships between lifestyle changes and a number of individual perceptual variables were explored using Pearson Product-Moment correlation coefficients. Consistent with Hypothesis 4, health beliefs and attitudes were significantly correlated with lifestyle behaviors. Scores on the Multidimensional Health Locus of Control scales were significantly correlated with changes in self-reported health practices. A high score on the internal health locus of control sub-scale was positively correlated with changes in physical activity ($r=.22, p=.01$), pounds over ideal weight ($r=.19, p=.05$), and balancing caloric intake with energy expenditure ($r=.25, p=.01$). Likewise, there were significant correlations at the .001 level between exercise and diet and the employee's belief in the importance of health habits to the length and quality of life. There were also correlations at the .001 level between the employee's belief in his own ability to achieve and sustain desired lifestyle changes and exercise. In addition, low scores on the satisfaction scale, indicating dissatisfaction with current health habits, were significantly correlated, at the .001 level with exercise.

Finally, nine multiple regressions were used to identify the five most powerful predictors of change among 14 independent variables entered into the equations. Consistent with Hypothesis 5, variables were identified that were the strongest predictors of change in health practices and physiological status. These variables were health locus of control, satisfaction (or dissatisfaction) with health practices, belief (or lack of belief) in the importance of health practices and a belief (or lack of belief) in one's own ability to make lifestyle changes. Gender, age, level of educational intervention, perception of organizational support and interest (or lack of interest) in health promotion programs were frequently among the three most powerful predictors of change but did not generally account for a large variance when all five variables were entered.

Conclusions

The data in this study suggested that a combination of individual attitudes and perceptions and external intervention strategies were associated with changes in employee health practices and health status. These findings suggest that when individuals are provided feedback about their health status, persuasive ways to reduce their risk and a supportive environment, they can make significant changes with a minimum of professional involvement. Employees who were already relatively healthy were more likely to make

changes in their exercise practices when supplied with information about its importance and access to an exercise facility than they were to make significant changes in dietary practices. Individual encouragement appeared to have significant results in changing dietary habits and decreasing cholesterol. Employees who received special dietary interventions decreased their cholesterol mean almost twice as much as employees who received only education. Therefore identification of high risk employees and targeting resources to them may be appropriate in the dietary area.

This study suggested that adult educators should focus on attitudes and beliefs when facilitating change. Employees who were dissatisfied with their practices, who were interested in programs, who believed health practices were important or who believed that they could change, were most likely to make positive changes. Therefore, understanding the effect that individual perceptions and other modifying factors have on individuals is useful in the selection of intervention strategies.

Health promotion interventions, the focus of this study, were primarily educational in nature and were designed to help employees change unhealthy behaviors and lifestyles, and so decrease their future risk of chronic diseases. Adult educators can be successful in facilitating lifestyle changes within corporations if they have an understanding of the biologic mechanisms that place individuals at high risk, develop interventions to reduce those risks that are consistent with educational theories and research findings and use the corporate structure to support positive lifestyle changes.

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LINDEMAN, KNOWLES AND AMERICAN INDIVIDUALISM

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Abstract: Exploring a cultural interpretation of 20th century American adult education, a contrast between Lindeman and Knowles is presented through the categories of mainstream individualism as analyzed by the recent book on American Character, Habits of the Heart -- Individualism and Commitment in American Life.

This paper explores a cultural interpretation of 20th century American adult education. Building upon previous work (Podeschi, 1986) in which philosophies of adult education are analyzed in the context of American mainstream values, this focus probes the history of adult education within the changing context of the core value of individualism. Following a recent study (Fisher & Podeschi, 1986) that analyzes significant philosophical differences between Lindeman and Knowles, this paper pursues the question of the historical significance of the contrast between Lindeman and Knowles.

Used as a base for analysis is the new book on American culture considered the best since Tocqueville's (1945) 19th century Democracy in America. Habits of the Heart -- Individualism and Commitment in American Life (Bellah et al., 1985), utilizing a methodology synthesizing philosophy and social science, analyzes the historical foundations and contemporary forms of mainstream individualism.

The primary perspectives of the five authors of Habits of the Heart are utilized here as lens for viewing Lindeman's (1961) The Meaning of Adult Education, first published in 1926, and Knowles' (1970) The Modern Practice of Adult Education. Although other literature served as background, this analysis is limited to the application of Habits of the Heart to the two works considered by some to be the most important contributions to the field of American adult education (Ilsley, 1982).

Traditional and Modern Individualism

The authors of Habits of the Heart break American middle-class individualism into four categories. The biblical and republican strands portray traditional individualism, in which the independent self is socially situated as part of a larger whole, with emphasis on community and social commitment. Modern individualism, dominated by the utilitarian and expressive categories, has the self as the primary reality, not only as the center of volition but as the target of life. Each of the four categories has its own roots of self-reliance and independence in American history, and each in some mixture of categories is still found in contemporary American life. What is most significant in the analysis by Bellah et al. is the shift in the shape of American individualism during the 20th century.

Biblical individualism has its roots in puritan heritage and its mission to create a community in which an ethical and spiritual life can be lived by individuals. Exemplified by the early colonist, John Winthrop, true individual freedom is moral freedom, the liberty to do what is good and right for God and others. Justice is much more a matter of ethical substance than procedural processes.

Republican individualism is rooted in the Jeffersonian ideal of political freedom that is to be obtained through active participation by educated, concerned citizens. Freedom is seen as protection for oneself and other individuals from outside oppression, such as arbitrary state action. However, individual freedom is meaningful only within a social context of ethics; without this, individual freedom can destroy itself.

Both strands of traditional individualism assume a legitimate reality for the social dimensions and commitments that surround the individual. In each strand, there is a synthesis of private and public life that is situated in ethical imperatives that are higher than the self. The individual's work is morally inseparable from his or her total life. Vocation is more of a calling than an individual career.

In contrast, the modern individualist is characterized by fragmentation of public and private life. The current categories that dominate contemporary life, utilitarian and expressive, have their beginnings in the 18th and 19th centuries. Utilitarian individualism, modeled by the self-made man of Benjamin Franklin, has an aim of self-improvement. Freedom is the opportunity to get ahead on one's own initiative. Out of this emerges for many 19th and 20th century utilitarians the assumption that the self-reliant individual following self-interest will lead ultimately to the greatest social good.

Negative reaction to the self-control of utilitarians lay the foundation for expressive individualism. Historically represented by Walt Whitman, freedom means the expression of the authentic self, and its aim is to cultivate and fulfill the self. Through individual exploration of his or her identity with the universe, the self may find social, even spiritual, harmony.

Although the foundations of utilitarian and expressive individualism go deep into our history, it is the current forms, according to Habits of the Heart, that now run widely in a society in which the social and ethical contexts of traditional individualism have melted. Current examples of biblical individualism (e.g., evangelical Christians) and republican individualism (e.g., political activists) can not escape the mode of contemporary life. Marking modern individualism are: self-judgement of life effectiveness, emphasis on technical means rather than ethical ends, style over substance, interest politics, and vocation as specialization. Bureaucracy particularly pushes modern individualism with priorities of effective management, negotiation and contract, and professional expertise. Trying to escape the pressures of the work place, the self seeks personal comfort and gratification in the home, family or lifestyle enclaves. But the individual is still a socially unsituated self, struggling to find the right fit between his or her work life and his or her private life, one who is ripe for the therapist. It is the therapist and the manager that symbolize contemporary American culture for the authors of Habits of the Heart. They write:

Like the manager, the therapist is a specialist in mobilizing resources for effective action. ... The goal of living is to achieve some combination of occupational and "lifestyle" that is economically possible and psychically tolerable, that "works." ... it enables the individual to think of commitments -- from marriage and work to political and religious involvement -- as enhancements of the sense of individual well-being rather than as moral

imperatives. ... The expressive culture, now deeply allied with the utilitarian, reveals its differences from earlier patterns by its readiness to treat normative commitments as so many alternative strategies of self-fulfillment. (pp. 47-48).

Lindeman and Republican/Expressive Individualism

Against the backdrop of Habits of the Heart, The Meaning of Adult Education reads more than anything like republican individualism. Individual freedom can only be enhanced when concerned citizens are involved in social action. Like Jefferson, Lindeman stressed the importance of educated citizens. Adult education is to enhance an intelligent citizenry by helping individuals 1) to learn to improve themselves and 2) to learn how to change the social order. The meaning of adult education is lost if the processes of individual learning and the means for collective action are not kept consciously and consistently within a context of values, the paragon value being a democratic society. For Lindeman, democracy means not only political freedom; he saw economic injustice and political injustice as sociologically inseparable. Individuals need to understand the totality of societal forces that impede freedom of oneself and others. It is this social context that should keep adult education from becoming individualistic.

It is the republican strand in Lindeman that retains the dimensions of traditional individualism in his philosophy of adult education. Like Dewey, Lindeman rejected the idea of absolutes that are part of the biblical tradition. He explained his pragmatism: "rules which force conduct into channels already marked out prevent even moralists from exercising a truly moral influence; evolving, creative, intelligent conduct flies out of the window when absolutism enters the door (p. 100)." There are, however, strong ethical imperatives for Lindeman; like Dewey, democracy is almost an "absolute." Like Dewey, he saw no dichotomy between the individual and what is social. In contrast to the modern individualist, Lindeman viewed the concepts of society and community as having as much of a legitimate reality as that of the individual self.

There is also for Lindeman an inherent integration of private and public life. Not only is the individual sociologically part of the social environment, but the self has an ethical responsibility to others. Career can not be justified solely as a means for self-fulfillment. The individual's work, and the organization in which it takes place, has social consequences. Lindeman's concern about increasing specialization included its detrimental effects upon the individual's social vision as well as its narrowing effects upon self improvement. Social ideals are always part of the value context necessary to adult education. But Lindeman was no utopian idealist; nor did he believe in the American myth of the selfless, autonomous hero. Adult education finds meaning in the inevitability of conflict and through the role of collective action in enhancing ideals, including the ideal of unfragmented lives in modern industrialization.

His hope for integrated individuals comes also out of the strand of expressive individualism that is found in The Meaning of Adult Education. Walt Whitman is a frequent Lindeman reference; the chapter, "The Need for Self-Expression" highlights individuality as uniqueness of personality; and his chapter, "Those Who Require Freedom" focuses on the self-constructed barriers to freedom within the individual.

Lindeman's expressive strand of the subjective self is always wedded to the objective self of the republican strand. He cautioned not to confuse the feeling of independence and individuality with that which is real. Likewise, he warned of negative freedom that comes from overemphasizing freedom from external obstacles. Adult education should make us more aware of ourselves as well as more aware of the external factors actually affecting our freedom. "The sense of freedom arrives when we become sufficiently intelligent to face both ourselves and our environments critically. ... (p. 50)". "If then learning adults wish to live in a social environment in which their intellectual alertness will count for something (will get itself realized, i.e., in power, creative expression, freedom, et cetera) they will be as eager to improve their collective enterprises, their groups, as they are to improve themselves. (p. 104)." For Lindeman, self-expression and creativity have deeper meaning in mediated social contexts.

Knowles and Modern Individualism

The primary similarity between Lindeman and Knowles is the tie to the strand of expressive individualism. Both reflect the influence of twentieth century psychology, placing importance on individual needs, self-motivation and freedom in learning. Both believe that adult education should aim toward personal growth. But there are primary differences between Lindeman and Knowles that make their respective forms of American individualism two contrasting types. Whereas the strand of expressive individualism for Lindeman is weaved tightly to his strand of republican individualism, Knowles' expressive strand only flirts with republicanism and ends up having to marry utilitarianism.

Underlying Knowles is a faith that the adult self has the opportunity to improve itself on its own initiative, and that pursuing individual needs and interests through adult education will ultimately lead to a better society. The core reality, as for the modern individualist, is the self, with freedom meaning to fulfill the self. Knowles' (1970) chapter on the mission of adult education is primarily a focus on individual needs. For him, society's deep need is "to retool the present generation of adults with the competencies required to function adequately in a condition of perpetual change" (p. 33). The Modern Practice of Adult Education portrays Knowles' belief that civic virtue will arise out of natural self-fulfillment through adult education, unlike Lindeman's belief that individual freedom needs to be protected from forces outside the individual, including the detrimental effects of utilitarianism.

Whereas Bellah et al. see the modern American individualist trying to escape the bureaucratic pressures and ambiguities of the contemporary work place by finding fragmented gratification in private life, Knowles has a faith in an ideal integration between contemporary organizations and individual selves. Adult education can humanize the modern organization while simultaneously enhancing its effectiveness. Although Knowles does not at all assume a self-interest economic understanding of human existence, he does reflect the modern individualist's adherence to effective mobilization of resources, professional expertise, and technical problem solving. Like the manager and the therapist, Knowles' focus is on the effectiveness of means for fulfilling needs in the institution and in the individual. The ends of life are taken as they are given. In contrast to Lindeman, for whom economic man and his organizations posed an inherent social problem, Knowles views this

only as a problem of needs solvable by well-targeted adult education in the organization.

It is not an insignificant merger when both behaviorist and humanistic philosophies of adult education carry Knowles as a contemporary model. Although there are underlying differences between these two philosophies, Knowles circles around these differences like the modern individualist, with focus on educational strategies, not ends or epistemology. The Modern Practice of Adult Education is mostly a modern pragmatism of means, not a philosophy of purpose and society, as found in Lindeman. Although the first paragraph of The Meaning of Adult Education argues that philosophies need to be integrated in adult education, not made mutually exclusive, the rest of the book places such integration within a framework of a total philosophy of adult education that draws upon the ethical and social dimensions of traditional individualism.

Likewise, Knowles' concept of andragogy -- one that Griffin (1983) labels a "theory about" individual characteristics of learning and teaching -- is that of the modern individualist. In contrast to Lindeman's "philosophy of" andragogy -- that entails questions of purpose, how knowledge is defined, and the relationship between the individual and the society -- Knowles' "art and science of helping adults learn" is primarily concerned about methodology, not the goals of either the changing organization or the autonomous self. Rather than Lindeman as the "spiritual father" of andragogy and Knowles as the "nurturing father" as recently presented by Davenport and Davenport (1984), Lindeman's andragogy should be seen as glued philosophically to republican individualism and Knowles' andragogy as glued sociologically to utilitarian individualism.

Potential Significance

The interpretation of Davenport and Davenport (1984) of Knowles as a natural sequel to Lindeman is typical of the historical interpretation that emphasizes the continuity of American adult education since early in the century. McKenzie's (1979) conclusion that "Dewey begot Lindeman and Lindeman begot Knowles" (p. 258) portrays this view of historical progress that began in the progressive era. And it is Knowles' (1977) own institutional history of American adult education, considered the standard in the field, that exemplifies the dominant historiography of continuity and progress. So it is not surprising to find at the National Adult Education Conference centennial celebration of Lindeman's birth, Stewart (1985) (who is completing a book on Lindeman) proclaiming the historical and philosophical connections among Lindeman, Knowles and the optimistic future of adult education.

The probing in this paper of Lindeman and Knowles through cultural categories of American individualism is an example of a theoretical framework that emphasizes discontinuity as well as continuity. But seeing historical discontinuity, even philosophical differences between Lindeman and Knowles, does not in itself imply a cultural interpretation. Elias and Merriam (1980), for example, analyze the similarity and contrast between Lindeman's progressivism and Knowles behaviorism and humanism as a reflection of philosophical evolution in American education. Although seeing progressivism as a particular response to social conditions, what is neglected is the tie of this evolution to the changing mainstream cultural context of the United States during the 20th century. Elias and Merriam are well aware that "only a

few adult educators have taken up the social thrust of the progressive education movement" and that "the learner-centeredness and methodology of the progressives have had a much greater impact upon the field of adult education (p. 68)." What a cultural interpretation can do is to go beyond this to explain that this shift in adult education during the century reflects a transition in American character, one analyzed here as an increasing shift to modern individualism.

The analysis presented here, one of broad brush strokes, is limited as well as generated by its focus. A more thorough analysis of Lindeman, for example, would include the whole of his writings and their specific historical contexts. Habits of the Heart is one interpretation of cultural tradition and change, one with boundaries of the white middle class. However, the purpose of this analysis of Lindeman and Knowles, more than anything, is to encourage an interpretive framework that is steeped in the continuity and discontinuity of mainstream cultural values, one in which American adult education was, and is, inescapably caught.

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THE RESISTERS: AN ANALYSIS OF NON-PARTICIPATION IN
ADULT BASIC EDUCATION

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Abstract: Traditional ABE programs attract between 2% and 10% of the estimated 30,000,000 functionally illiterate adults in North America. If such high non-participation is seen in a new conceptual framework of resistance theory, the field becomes challenged to see itself critically and find new learner-grounded directions for the future.

The Issue and Its Significance: Fingeret has observed: "perhaps part of the problem is that once we recognize the inadequacies inherent in our approach to illiterate adults, we have little to offer in its place" (1983, p.133). These "inadequacies" appear in the literature under two groupings of ABE critics: those internal to the field, such as Fingeret (1983, 1984), O'Brien (1979), and Fitzgerald (1984); and those external to the field, such as Thompson (1980), Keddie (1980), and Willis (1977). The internal critics argue for change from within the field, centering on practitioner and researcher "deficit perspectives" and the need for increased understanding of learners. The external critics argue that such "liberal" notions are hopelessly naive "without corresponding and significant changes in the organization and control of economic life" (Thompson, 1980, p.26). They call for radical socio-economic change from outside of the field.

Meanwhile, base funding and public support to ABE continues to decline in Canada and the U.S.A. Professionals are now being asked to support volunteer literacy tutors, instead of tutors supporting literacy professionals. The field is also being eroded at the more senior program levels with traditional classes having to prove themselves "job worthy." Thus, basic literacy funding is all but lost and the remainder is on the budgetary chopping block. With over 30,000,000 adults with less than grade IX ("functionally illiterate") in North America and over one-third of the continent's adults either functionally or marginally affected by low literacy skills (Kozol, 1985; Statistics Canada, 1981); with far in excess of 50 billion dollars lost annually through productivity loss, taxation loss, and direct program expenditures in the U.S.A. annually, (Kozol, 1985, pp. 13-14), the mounting pressures on ABE just cannot be ignored. Yet, as Fingeret observes, we in ABE have "little to offer in its place" (1983, p.133).

Of four categories in the ABE literature, Fingeret finds that the theory/philosophy/policy category is "by far the smallest category" (1984, p.6). She has called for research "conducted with sophisticated models that address the interaction between the individual, culture, and larger social forces" (1984, p.44). By first providing a new conceptual framework, this research attempts to develop such a model and hopes to lay a new foundation for policies and research into the future.

The Literature: If asked why a mere 2% - 10% participate in traditional ABE, the literature does not respond with research based on non-participants. Instead, non-participants in the literature are generally assumed to be the "hard-to-reach" in a blaming-the-victim paradigm (e.g., Brockett, 1983; Dauksza-Cook, 1977). Or, governments are

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"blamed" for underfunding (e.g., Harmon and Hunter, 1979; Mezirow, Darkenwald and Knox, 1975). Such sweeping assumptions on non-participation are unsatisfactory in view of interviews with illiterates by Eberle and Robinson (1980) or interviews by Clark (1978) wherein non-participants said traditional ABE programs were "worthless" (p.64). A growing number of researchers such as Thompson (1980), O'Brien (1979), and Coles (1977) have found that cultural and value change is the primary goal of traditional ABE rather than education based on learner needs. Not surprisingly, Mezirow, Darkenwald and Knox (1975) found that the 2 - 10% participating are those "creamed off" by "attracting students who have internalized typical middle class values .. who function relatively well in formal educational settings" (1975, p.136).

Threading through the literature is a voice of non-participation resistance -- a critical learner perspective which finds traditional ABE unacceptable. The research need was to analyze resistance-based criticisms of the field and attempt to develop principles and recommendations which might be acceptable to more resisters among the over 90% (i.e., the over 27,000,000) not participating. As Fingeret so succinctly puts it: "if we do not learn to work with them, many illiterate adults will continue to refuse to work with us" (1983, p.144). Regardless of the disagreements over definitions of "illiterate", "functionally illiterate", "undereducated" and the like (e.g., Cervero, 1984; Levine, 1982), the field needs to find new, more effective ways to meet the needs of its target group. Resisters give us some useful insights.

The Conceptual Framework: As suggested above, this research took the position that the limited literature on non-participation in ABE is all too often founded on assumptions arising out of the 2% - 10% classroom participant group. If non-participants are seen as "different," and at least some are seen as resisting the formal educational system, then a new, constructive "outside perspective" on ABE becomes possible. This perspective can be understood in a framework from sociology -- resistance theory.

The first step in the introduction of this framework was to first ask what traditional ABE "is"--to analyze it from a reproduction theory viewpoint, the sociological theory which preceded resistance theory. Following such an examination, the application of resistance theory to ABE was analyzed and a resistance-based conceptual model adapted from Gramsci was introduced. This new framework and the new model was then tested against the experiences of resisters to traditional schooling (i.e., public schooling, colleges, parochial schooling, etc.)). On the basis of their experiences and views on schooling, new principles applicable to ABE became apparent. These were applied to ABE practice in the form of broad recommendations for practice and research.

Other outcomes of this study included an original model of the steps in the behaviour of resistance and their positioning in the stages of empowerment (based on Stanage's 1986 work on the unrestraining of liberty). Also, further investigation on the reliability and validity of fictional literature as a data source was conducted since fictional literature was the data source used in this research. Finally, an unprecedented application of phenomenology as a methodology to fictional literature was a further contribution to adult education research.

As noted, ABE critics tend to be polarized between the "sociological" external group of critics and the "psychological" internal critics. On this, Fingeret writes: "It is difficult to develop a model that combines a nondeficit view of illiterate adults and an understanding of illiteracy as the result of the interaction between structural and cultural factors" (1984, p.17). In fact, these two polarized views reflect the two broader theories of the reproduction school and the emerging resistance school, respectively. At this level of theory, for purposes of ABE, a workable model which does reconcile the two views becomes possible in a new "Resistance Model".

As reviewed in this research, the reproduction movement argues that schooling is both consciously and unconsciously a reproduction of the class structure within a capitalist society. Borrowing a categorization from Giroux (1983), the reproduction theorists were categorized through history into: 1) an economic-reproduction school, 2) a cultural-reproduction school and, 3) a political or "hegemonic/state" school of reproduction. When reproduction was applied to literacy and ABE in this study, dating from Thomas Pole's History (1814) and William Smith's first adult education school, it was found that economic, cultural and political reproduction have long been an ideological foundation for ABE and literacy programs. Even today ABE critics find that: "the language of 'personal deficit', 'affliction' and the need for 'treatment' to 'rehabilitate' the 'malfunctioning' adult into 'normal' society runs like a medical checklist through the literature" (Thompson, 1980, p.87). As if time has stood still for ABE, Thompson is quoted: "The tone is one of mission and concern for the less fortunate" (1980, p. 87).

ABE critics today note that normative values and dominant culture expectations play an overwhelming role in traditional ABE programs (e.g., Thompson, 1980; Harmon and Hunter, 1979). On the level of economic reproduction, it was found that traditional ABE programs almost invariably brought "vaulting ambitions" down to "the anemic language" (Mezirow, Darkenwald and Knox, 1975, p.4) and normative expectations inherent in the traditional ABE curriculum.

On the cultural reproduction level, Mezirow, Darkenwald and Knox discussed ABE's "latent lessons" of the "promise of education as the high road to mobility and success" (1975, p.4). Coles (1977) has reviewed materials from five major publishers used widely in ABE and found them consistently reinforcing sexism, racism, class conformity, "proper attitudes" towards authority, and a blaming the victim point of view. Finally, "banal nationalism" (p.50) was woven throughout the five cultural reproduction themes, according to Coles.

As for political, hegemonic/state reproduction, this research applied ABE critics such as Apple to ABE who have found a blaming-the-victim hegemony at work in the handling of "deviants" within the educational system -- "special groups" shuffled away from the mainstream. Critics such as Ziegler were included in this research speaking to the all-pervasive influence of government in ABE funding and directions, ultimately "governing" under the pretence of "support" (cited in Cross, 1982, p. 33).

Resistance theorists, on the other hand, argue from a micro-level which sees the power of free will and choice in the hands of the individual (the learner in this case). Schools, as Giroux sees them, are not "black boxes" but "a source of contradictions" that provide "spaces for oppositional behaviour" (1983, p.260). Individuals are not victims in a deterministic socio-economic structure, for resistance

theorists. As Giroux notes: "Resistance ... redefines the causes and meaning of oppositional behaviour by arguing that it has little to do with deviance and learned helplessness, but a great deal to do with moral and political indignation" (1983, p.289). Resistance theorists argue that, in reproduction theory, "human subjects generally 'disappear' amidst a theory that leaves no room for ... self-creation, mediation, and resistance" (Giroux, 1983, p. 259). Like the internal critics, the resistance theorists focus on learners, on "human agency". Thus, the traditional system of ABE can be understood in reproduction theory terms, being resisted by at least some non-participants.

While the internal critics are aligned with resistance theory, they nevertheless do not go beyond attitudinal criticisms, seeing the traditional system as "fixable" for purposes of including non-participants. The findings of this research based on resisters to schooling suggests the opposite. Instead, based on resister's views, "learner-grounded" alternatives are needed if resisters are to be attracted to ABE. They resisted schooling once. Offered a very similar reproductionist system, they resist once again. Resistance theorists do not call for sweeping socio-economic changes in society. They argue only for schools as "pockets of resistance" that provide pedagogical models for new forms of learning and social relations" (Giroux, 1983, p. 293). Resistance against a reproductionist system provides a framework for seeing non-participant resistance as a constructive and positive force for "something else," as will be discussed.

Data, Method, Findings, Applications: The data used consisted of ten works of fictional literature selected under four criteria developed by McKenzie (1975) and analyzed using phenomenological methodology. Each of the ten works included a "resister," operationally defined as one overtly or tacitly challenging the schooling system while simultaneously embracing an alternate set of values and/or an alternate lifestyle to that advocated by schooling. The ten works analyzed were:

Adventures of Huckleberry Finn (Twain), "The Conversion of the Jews" (Roth), The Apprenticeship of Duddy Kravitz (Richler), Studs Lonigan (Farrell), Grain (Stead), Who Has Seen the Wind (Mitchell), In Search of April Raintree (Culleton), Half Breed (Campbell), The Catcher in the Rye (Salinger), Too Far to Walk (Hershey).

A close phenomenological analysis of resistance in these works revealed six steps in a resistance behaviour process: observing, comparing, challenging, breaking away, controlling, accepting/reconciling. These steps were found to take place in a framework of five stages of empowerment (based on Stanage, 1986). A new construct of resistance and schooling emerged from this analysis as follows: "The meaning of resistance ... is a struggle to become free in the eyes and heart of the resister on the basis of a specific liberty which must be attained and held at any cost". "Schooling" derived a new construct as well: "to interpret a physical environment which embodies both the habitat of objectified lessons (Bourdieu) and the habitus of values and culture. Habitus could be culturally, politically, morally, or emotionally unacceptable to resisters. The habitat of lessons, however, can be acceptable if relevant."

These two constructs arose from the findings that resisters to schooling consistently developed an increasing intolerance of the schooling habitus -- the hegemony of values, life-styles, normative expectations -- but not one resister resisted the habitat of objectified

lessons of reading, spelling or numeracy. Thus, this study found a vast difference between participants and non-participants resisting traditional schooling. When applied to ABE, it recommended that "non-participants in ABE not be assumed to be 'the same as' the less than 10 percent who attend formal ABE" (p.293). The finding that resisters are consistently resisting habitus (i.e. values) not habitat ("i.e., objective lessons") lead to the recommendation that alternative "learner-grounded" ABE needs to be developed, built on the habitus of resisters themselves, with the habitat of objectified knowledge as the learning content.

A third finding was that the most visible resister was never the first to quit school. In fact, the more silent, least visible resisters were the most determined and the first to leave. Far from being "failures," the findings were that all resisters in this data source had a keen sense of injustice and a remarkable level of courage to fight for their own integrity and that of their chosen alternative value-system. The application to ABE was that resisters cannot be "made to learn" in compulsory programs and it was recommended that "compulsory basic education for resisters be dropped from the list of workable delivery options for learner-grounded basic education.

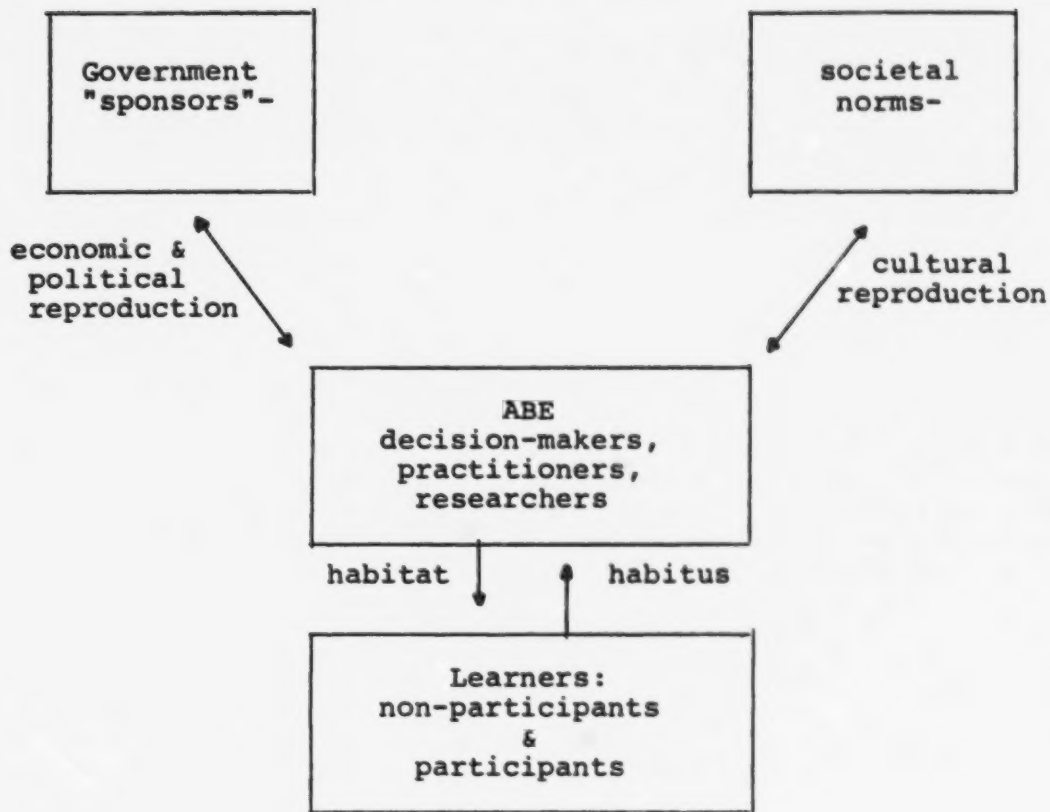
Since the steps of resistance behaviour were found to be consistent in these data, and since the steps of "comparison", "challenge", and breaking away came early in the process, it was clear that a resister will determine whether a program is acceptable or not very early on. The application and recommendation was that the criteria for success of learner-grounded ABE should include direct learner-grounded feedback and that program attrition rates should be used in any summative or formative evaluation of such programs.

Other findings were: resisters came from every socio-economic background and culture in these data; resisters say "no" to schooling's habitus but simultaneously say "yes" to another habitus they see as superior. Resistance is not "caused," it derives from a deliberate choice arising from the resister. Thus, ABE cannot hope to simply "eradicate" the "causes" of resistance in traditional programs and hope to have "fixed" traditional ABE for resisters' purposes. Also, in seven of ten data sources, the father-figure was found to be the single most influential figure in the resisters' decision to resist. This suggested that the father-figure role needs to be given serious consideration in ABE projects involving resisters' families.

Possibly the most significant finding was that a successful program involving resisters will need to be based on the alternate habitus which a resister has chosen. In short, it must be "learner-grounded". The content needs to be comprised of relevant habitat--objectified lessons such as reading and numeracy. To this end, it was noted that ABE personnel at all levels are pivotal if sponsors and society are to be informed of learner needs and their attitudes changed through time. It was recommended, therefore, that "ABE personnel become involved in gradually, determinedly, shaping sponsors' and the public's opinion of resisters who engage in learner-grounded basic-education."

The Gramsci-adapted resistance model proposed, combining a non-deficit perspective and societal change, was presented as follows to facilitate this gradual counter-hegemony into the future:

Resistance Model



Finally, it was recommended that researchers in adult education turn more attention to the issue of resistance in ABE and in adult education since this phenomenon holds promise for understanding non-participation across all fields of adult education.

Conclusion: To offer something "in its place" requires a new capacity for seeing traditional ABE in constructively critical ways. The viewpoint of non-participant resisters speaks to the limitations of traditional schooling. These lessons from the resisters applied to ABE, together with a model to sustain the non-participant voice in ABE research and practice, can provide new grounds for ABE alternatives into the future. Finally, as was discussed in the conclusion of the research, recommendations for basic education arising from adults' expressed needs may require some "radical" alternatives in ABE, but needs-based education is far from "radical" for adult education; rather, it is more often essential for program success with adults. Adult resisters were found to be no exception.

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"THE WORKERS ARE FINDING A VOICE"
Empowerment Among the Unemployed in the Great Depression*

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Abstract: An historical examination of the Chicago Workers' Committee on Unemployment (ca. 1931 - 1935) illustrates the empowerment process which resulted from the interplay of often idealistic organizers-cum-educators and unemployed worker-members driven by urgent, practical, needs.

Introduction

We are indebted to Rockhill (1976), Rose (1982), and several other recent historians of adult education for reminding us that a useful contribution to the history of our field must do more than add the name of another institution or movement to our collective memory. We need to understand how such an entity worked, not just what it was supposed to do or how it functioned internally, but how it fit into an historical context, what felt need it was attempting to satisfy, and, especially, how it reflected the protean consciousness of its participants. Otherwise we will merely "comb the past" (Rose, 1982:3), using history as an encyclopedia of alternative program models rather than an integrated exposition of past adult education experiences.

The purpose of this study was to make some educated historical guesses about the experience of 25,000 unemployed workers (League for Industrial Democracy) who joined the Chicago Workers' Committee on Unemployment (CWCOU) during the first half of the 1930's. During the early years of the Great Depression a myriad of radical political parties, churches, settlement houses, and others attempted to organize the unemployed into activist groups that concentrated on solving the problems of the jobless on neighborhood, local, and national levels. The CWCOU, founded by the League for Industrial Democracy (an educational offshoot of the Socialist Party of America), was an unusually successful example of unemployed organizing in this era, building a much larger

*Quote is from Borders, 1932. The research reported here is part of a larger project which will be completed by the time this paper is presented. Copies of the longer article which will result should be available by the time of the conference.

membership than its counterparts* and enduring in some form until the end of the depression decade.

Specifically, through this study, I hoped to discern the educational circumstances which seemed to make the CWCOU an especially effective vehicle for empowering its unemployed members.

Methodology

This study was conducted using the historical method. After a review of relevant literature from secondary sources -- almost all written by historians and sociologists rather than educators -- I examined primary sources.

The available evidence is fragmentary. No single collection of the records of the organization or its major leaders exists. Consequently, I consulted three types of primary sources. The most copious sources of data are the records of individuals and organizations -- especially settlement houses -- that include mostly contemporaneous firsthand accounts of CWCOU activities. In addition, several of the organizers of this effort, especially Karl Borders and Robert Asher, published accounts in contemporary newspapers or in the form of scholarly theses. Oral histories with two CWCOU leaders (Robert Asher and Frank McCulloch) were the final significant primary source.

The two most revealing primary sources for the purposes of this study have not been cited in previous accounts of the CWCOU. The Raymond M. Hilliard papers include the correspondence between the organization and the local welfare authorities and provide a telling chronicle of competing organizational priorities. The minutes of the Italian Community Association, 1933 - 1937, (Chicago Commons Papers) which held weekly meetings at the Chicago Commons settlement are the only comprehensive records of a CWCOU local which I could identify.

Operational Definitions

Given their often contested nature, the following terms were used in this study as operationally defined below:
Educational Circumstances - any situations designed to promote social education defined by Reed as a "conscious process of analyzing . . . involvement in communities and workplaces" (1981:5) including, for example, the planning, execution, and

*According to Leab, the Communists were the only other significant organizing force among Chicago's unemployed and their membership only reached about 10,000 at its peak.

evaluation of a public pressure strategy and its component tactics, and

Empower - lead one to take an active, conscious, role in the shaping of one's world.

The Workers' Committee as an Educational Phenomenon

The history of the CWCOU deserves our attention for at least three reasons: its founders had educational goals; it provided educational services to its members and to the public at large; and, most importantly, it provided an environment for empowerment through praxis.

The two institutions most involved in sustaining the CWCOU -- the League for Industrial Democracy and the settlement house community of Chicago -- perceived their activities as conspicuously educational. The League, whose leaders included John Devey and Alexander Meiklejohn, proclaimed itself dedicated to "(e)ducation for a new social order based on production for use and not for profit" (Johnpoll and Yerburch, 1980:3). Similarly, the settlement houses which often provided CWCOU meeting spaces included accounts of CWCOU activities in monthly and annual "adult education" reports (Chicago Commons' Papers, Hull House Papers, and the University of Chicago Settlement Papers). Both sponsors shared a conviction that the existing "social order" was not working for many Americans. Many of the students, professors, clergy, social workers and others who joined the League staff in supporting CWCOU, whether or not they were actually members of the Socialist Party, agreed that capitalism and democracy no longer seemed compatible (Asher, 1934). Their prescription for the ailing social order was a package of public policies beginning with adequate cash relief and social security and culminating in the kind of statesman-like economic planning they believed necessary to avert another economic catastrophe. Thus, when they spoke of education, they had specific results in mind: persuading the public and, especially, those who made public policy of the necessity for new initiatives. As Davenport (1983) has suggested, such activities -- which contemporary adult educators may label indoctrination or propaganda -- played a significant role in shaping consciousness and developing problem-solving strategies.

A second reason for examining the CWCOU is that its founders and members did more than talk about visions for a new society. They actually conducted conventional educational activities. Members attended planned weekly lecture series at their neighborhood "locals" on such topics as "The Current Emergency" and "What the Unemployed as Individuals Can Do" (Asher interview, 1987). They learned public speaking, bookkeeping, and organizing skills. The organization also provided several unique opportunities for public education.

On at least four occasions, it held public "hearings," soliciting testimony from unemployed workers, their families, landlords, and neighborhood merchants. A speakers' bureau included both unemployed workers and their more well-heeled allies. The group sponsored public lectures, debates, and, occasionally, protests and demonstrations all designed to elucidate the causes, conditions, and appropriate remedies for unemployment.

The CWCOU, then, did educate in the sense that it transmitted both knowledge and skills to its members and, in some ways, to the public at large. But the third and most compelling reason for us to be interested in CWCOU and organizations like it is because the democratic structure and function of the organization provided an environment where the inevitable -- and sometimes creative -- tension between the "teachers" (CWCOU's organizers) and the "students" (unemployed members) could result in a kind of praxis. Reflecting, with patient deference for the usually socialist (and occasionally doctrinaire) analysis presented by their organizers, on their experience and daily realities, workers in their weekly local meetings and, especially, during the fortnightly meetings of their Central Committee of representatives from each local, often chose to act with different emphasis and different priorities than the organizers proposed. One frequent tension was between the organizers' desire to concentrate on building pressure for legislative solutions and the workers' desire to concentrate on making local relief stations both more responsive to their needs and more equitably managed. Tension did not appear to result in major organizational rifts -- both sets of desires were usually accommodated -- but the process leading to the accommodations repeatedly required workers to crystallize, articulate, and defend an analysis of their circumstances which would not otherwise have been necessary. It is this process of ongoing analysis, the necessity to reflect with the group before acting with the group, which resembles the empowerment process that we have come to associate with Freire's description of "praxis."

That this educational process should emerge through an examination of the 1930's is not the result of uncanny premonition on the part of the participants in CWCOU. Myles Horton was clearly engaged in empowerment strategies by the mid-1930's (Adams, 1975). Furthermore, as Brookfield (1984) has demonstrated, Lindeman, who was himself active with the radical social work movement in New York City during the 1930's, understood the utility of examining personal experience to maximize student's awareness that they lived in a precise historical moment with an identifiable past and a malleable future. Indeed, by the 1940's, according to Brookfield, Lindeman had come to see, as Freire would later argue, that adult education and social action are synonymous in a genuine democracy.

Conclusions

Depending upon one's perspective, there are at least two ways to evaluate the work of the CWCOU. Most historians regard the achievements of the depression-era unemployed organizations in effecting appreciable social change as needlessly limited. As an adult education venture, however, CWCOU's achievements were quite respectable.

Historians have lamented the workers' short-sighted preoccupation with their "immediate needs." They argue that their potentially powerful organizations, thriving in an era when the capitalist system was at its most vulnerable, might have been engines of revolution. Instead, they contend, organizations like the CWCOU devolved into quasi-welfare agencies, obsessed with fine-tuning the relief process and negotiating with bureaucrats when they should have been dismantling capitalism (Rosenzweig, 1979; Piven and Cloward, 1977). Such criticisms cannot be refuted on their own terms.

Yet, in some ways, it was precisely CWCOU's lack of ideological coherence and revolutionary discipline which made it an attractive adult education enterprise. As Freire has argued, a genuine radical is not a sectarian (1970:23). Even though it was not always a democratic idyll (organizers such as Asher often found the degree of local autonomy maddening), CWCOU became a context in which unemployed workers and their more materially blessed allies had to arrive at common definitions of their problems and common visions of their solutions. If CWCOU is regarded as an opportunity in the lives of its participants to engage in making their material world more habitable, it cannot be regarded as a fiasco. By providing an organizational haven and being essentially faithful to their commitment to democracy, CWCOU's founders succeeded for several years in fulfilling their initial goal of letting the workers "speak [and think] for themselves" (Borders, 1932: 665).

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YELLOWSTONE NATIONAL PARK AND THE EDUCATION OF ADULTS

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Abstract: The purpose of this paper is to summarize the findings of a study which investigated (1) the manner in which the National Park Service provided educational opportunities for the park visitor in Yellowstone National Park from 1916 through 1985 and (2) the relationship between the Service's educational component and adult education.

Compared to other professions, the field of adult education is relatively young. And perhaps, because of its youth, it has relied heavily on the theory and research findings in general education and the social sciences. In recent years, however, adult educators have begun to create a body of research and theory unique to adult education. One area that deserves consideration is the environment in which adult learning and education have taken place. Of particular interest are those institutions, agencies, or organizations that have historically provided educational opportunities for adults. The National Park Service is one such agency. Since its origin in 1916, it has been the primary provider of educational opportunities for adults in America's national parks.

A study (Vick, 1986) was conducted which investigated (1) the manner in which the National Park Service (NPS) provided educational opportunities for the park visitor in Yellowstone National Park (YNP) from 1916 through 1985 and (2) the relationship between the educational component in the National Park Service and adult education. For this investigation, primary sources were obtained from the Yellowstone National Park Research Library and Archives; the records of the National Park Service housed in the National Archives in Washington, D.C.; and, the National Park Service Library and Archives located at Harpers Ferry, West Virginia. Some documents were obtained from the library located at the Service's regional office in Denver while others were obtained from certain Park Service employees. Also, interviews were conducted with sixteen current or former employees of the Service. Several weeks were spent in Yellowstone National Park and the Washington, D.C., area for the purpose of obtaining those sources. This paper, then, summarizes the results of that investigation, which yielded a fairly clear image of how and why educational activities were developed and implemented in YNP. Specifically, there were five major findings.

A Deliberate Choice: To begin with, the roots for the educational component of the National Park Service can be traced, in part, to Yellowstone National Park. The choice to offer educational programs in the national parks was a deliberate move by the first NPS director, Stephen T. Mather, and his assistant, Horace M. Albright, in the late 1910s and early 1920s. In these early years, it appears that the NPS felt it had an obligation to the visiting public to provide the necessary information that would allow them to maximize their park experience. In part, this was due to the belief that the educational values of the national parks should be actively promoted.

When he became superintendent of YNP in 1919 but continued to be Mather's assistant, Horace Albright was in a position to implement Mather's and his ideas about providing educational opportunities for park visitors. Although the origin of certain activities can be traced to other national parks, such as Yosemite, Yellowstone became the "model" park for educational programming. Had Albright become the superintendent of another park in 1919, that other park, rather than Yellowstone, would most likely have become the training ground for the educational policy of the NPS.

Involvement of Outside Organizations: The development of the educational component in Yellowstone and the National Park Service was closely tied to the involvement of outside organizations. Two organizations in particular, the National Parks Association (NPA) and the American Association of Museums (AAM), made significant contributions. The efforts of the NPA, established in 1918, were primarily centered around the promotion of the parks as "class rooms and museums." The AAM, on the other hand, obtained funding in the late 1920s from the Laura Spelman Rockefeller Memorial for the construction of several museums and roadside exhibits in Yellowstone. Not only did representatives of the AAM coordinate and supervise the construction but they also served as consultants for the NPS in planning the exhibits and programs that were to be included in those museums.

The Committee on Study of Educational Problems in National Parks (CSEPNP), a third entity, was not an outside organization as such since it was a government-sponsored unit. However, the majority of its membership was composed of individuals representing outside institutions, such as universities and museums. Formed in 1928, the committee's task was to make a thorough study of and to report on the educational possibilities of the national parks. The two reports the committee wrote in 1929 (CSEPNP, n.d.) resulted in the 1930 formation of the Branch of Education within the Washington administrative structure of the NPS. The field division of education, established five years earlier and based in Berkeley, California, became a unit within that branch.

A Common Thread: The basic format of educational programming established in the 1920s and early 1930s in Yellowstone--lecture service, guide service, museums, auto caravans--continued to form the basis of the educational component in the 1980s, thus providing a common thread over the decades. One would have thought that, with all the changes that had gone on in American society during those years, the Park Service would have sought new methods by which it could inform the visiting public. On the contrary, those traditional methods proved to be reliable vehicles for carrying out the dual mandate of preserving the resources and providing for the enjoyment of the people.

Of course, this is not to say that change did not take place. New technologies and techniques of presentation were integrated into the system. But, these changes occurred almost always within the basic structure established in the formative years.

An Evolutionary Process: The development of the educational component evolved through three interrelated stages, each reflecting a different philosophical approach to what was taking place not only in Yellowstone but in the entire park system. These stages have been designated as follows: Stage

I--Educational, 1920 - 1932; Stage II--Naturalist, 1932 - 1959; and, Stage III--Interpretive, 1959 - 1985. These stages were not as distinct from one another as the time frame implies; that is, they were not mutually exclusive. On the contrary, they overlapped each other, spilling over into and influencing each successive stage. The educational stage, for instance, was very much a part of both the naturalist and interpretive stages. In fact, the interpretive stage would not have persisted into the 1970s and 1980s if it were not for the events that occurred during the first and second stages.

The first stage represents the formative period for the educational work in YNP and the NPS. The original educational policies were developed in conjunction with those policies being developed at the national level. The practice of hiring seasonal ranger naturalists was begun and the basic format for the educational component was established. The years associated with the second stage involved considerable growth and expansion (except for the interlude of the Second World War); however, the basic format of the educational programs changed little. Thus, it represented an age of stability; that is, a "status quo" of sorts was developed and maintained. Also, it was during this stage that the words "education" and "educational" were dropped as descriptors of the educational component. The word "naturalist" was thought to be a better descriptor of the work being done in the parks and consequently was adopted system-wide.

A similar transition occurred during the third stage when the word "interpretation" was adopted as the primary descriptor of the educational component of the NPS. It was a transition that was due, in part, to the works of Freeman Tilden (Tilden, n.d.; 1968; 1977), in which he proposed that the work of the park naturalist was provocation and not instruction and that interpretation involved the presentation of whole concepts and not simply singular bits of information. Thus, it was during this stage that a crack in the "status quo" began to appear. For instance, in the late 1960s, one begins to notice slight variations in the established program, which were eventually reflected in a more creative and flexible schedule, although the primary vehicles or methods (namely, walks, talks, and non-personal visitor services such as museums and roadside exhibits) remained the same as those used in the previous two stages.

National Parks and Adult Education: The last major finding concerned the relationship between the educational component of the National Park Service and adult education, which was fairly strong during the late 1920s and early 1930s. When the American Association for Adult Education (AAAE) was formed in 1926, two of the participants in the founding conferences held throughout the country were Arthur Bestor, president of the Chautauqua Institution, and Chauncey Hamlin, president of the American Association of Museums (Rose, 1979). Bestor was also a participant at the first national AAAE conference held in Chicago on 26 March 1926 and was appointed to the first executive board of the AAAE. Interestingly enough, eight years earlier Bestor was similarly involved in the founding of the National Parks Association. Hamlin, on the other hand, was instrumental in obtaining the financial support of the Laura Spelman Rockefeller Memorial for the construction of four of the five museums and several wayside "shrines" in Yellowstone. Both Chautauqua and the AAM have been recognized by adult educators as two of the early institutional forms of adult education.

Perhaps one of the earliest references to adult education in the NPS literature was in a letter written by Director Mather in 1928 and addressed to prospective members of the Committee on the Study of Educational Problems in National Parks (NPS Historical Collection, 1928). In that letter he observed that "the delivery of lectures in various parks, establishment of nature trails and the nature guide services, and the development of museums have proven a fertile ground for adult education in these scenic reservations." The Committee, in fact, was being formed to consider "the broad question of adult education in the entire park and monument system...."

When he was the assistant director for the National Park Service in charge of educational work in the 1930s, Dr. Harold C. Bryant often referred to adult education in his writings or talks. For instance, in April 1932 he addressed the 12th Conference of National Park Executives in Hot Springs, Arkansas, as follows:

Suppose we look at this matter of 3,000,000 people coming into the national parks just from the educational viewpoint. Can you pick out in these days of adult education and the use of our schools at night for taking care of the teeming millions, can you find in this Nation of ours a greater project than that we find in the educational project now in our national parks? I want to say to you, as I have said many times to others, that I firmly believe this is the greatest educational project in the Nation to-day. There is nothing that compares with it. However, every time I say that, I sort of quake in the knees and get in a panic, because it is such an enormous proposition to try to help out these millions of people who come to our national parks (National Archives, 1932).

That same year Bryant (1932, p. 310) published an article in the Journal of Adult Education in which he stated that "the educational work in the national parks, by introducing people to a wide range of interests, by cultivating a scientific viewpoint and an appreciation of nature and nature's laws, is stressing the finest ideals of the adult education program." And, in a publication on research and education in the national parks, Bryant and his co-author (Bryant and Atwood, 1932, p. 8) raised the following concern in their discussion on improving the educational work: "There is hope that new methods in adult education will be discovered."

After 1932, however, the number of references to adult education in the NPS literature dwindled and appeared to be restricted to the 1930s. Why the direct relationship between the NPS and adult education disappears is not known. Perhaps it was because the NPS became more self-assured about its ability to develop and conduct the educational work and no longer felt it necessary to rely on outside individuals and organizations. Or, perhaps the NPS felt it was no longer necessary to justify the educational work in educational terms. Or, as the educational component evolved through the three stages of development, the NPS may have chosen to disassociate itself from anything that was affiliated with formal schooling since there were those in the NPS who believed that, if the interpretive component reflected a traditional classroom atmosphere, the park visitor would very likely refuse to participate.

In turn, when the profession of adult education was in its formative stage during the 1920s, an emphasis was placed on lifelong learning, especially those educational opportunities for adults which were available outside of the formal structure of public education through such organizations as the AAM and the American Library Association. Few of its organizers were from the public school sector. However, as the profession evolved, this alignment gradually reversed and the American Association for Adult Education became more associated with those institutions and agencies, in particular public schools, colleges, and universities, that were aligned with formal schooling. The concerns of the profession moved from issues surrounding lifelong learning in the 1920s to those of naturalization and democratization in the late 1930s and 1940s and to adult basic education and high school equivalency programs in the 1950s, 1960s, and early 1970s.

One might conclude, then, that because of the divergence in evolutionary paths, the educational efforts of the National Park Service were inadvertently overlooked, or perhaps even intentionally ignored, by adult educators. Not until the late 1970s and early 1980s does one see the evolutionary paths of these two entities begin to merge again. The profession once more turned its attention to the concept of lifelong learning and began to reemphasize the importance of those educational opportunities for adults that exist beyond the traditional classroom.

Even so, the relationship between the National Park Service and the field of adult education that began to emerge in the 1970s and 1980s was quite subtle and indirect, as reflected in references to the NPS in two adult education publications (Knowles, 1977; Peterson, 1979); in the admission by the NPS that it was in the business of education (obtained from personal interviews conducted in 1985 and 1986; listed in Vick, 1986); and, in the similarities that appear to exist between interpretation and andragogy. For instance, one similarity between these two concepts is the fact that the object being interpreted or taught must relate meaningfully to something within the personality or experience of the individual. Perhaps as more research is conducted on the histories of the field of adult education and of the National Park Service, a more direct relationship between the two may be revealed.

Conclusion: As is the case with historical studies, many questions were left unanswered in this investigation and new ones seemed to arise upon every turn of a page or every conversation held with NPS personnel. In spite of the unanswered questions and uncertain relationships, this study did substantiate the fact that national parks are environments in which adult learning and education can take place and the National Park Service is one agency within that environment that has offered educational opportunities for adults. It also indirectly reconfirmed two fundamental assumptions upon which adult education is premised, namely, that education is a lifelong process and that educational opportunities for adults to learn extend well beyond the four walls of a conventional classroom.

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A Longitudinal Study of Adult Basic Education in Virginia 1970-1985

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Abstract: A fifteen year longitudinal study of Adult Basic Education in Virginia from 1970-1975. The evaluation included the state and local levels of program delivery and collected data from the state staff, local administrators, supervisors, teachers, counselors, aides and students. Questionnaires and/or interviews were conducted with 4,437 randomly selected participants. An eighty-one (81) percent return was realized with the study. The results were reported in eighty tables and forty five (45) recommendations for change were made.

Statement of the Problem

Systematic long term program evaluation is essential to effective program management and planning. In 1970-71 Virginia Commonwealth University conducted the first state-wide ABE evaluation and in 1977-78 conducted the second evaluation. These evaluations were cited by H.E.W. as outstanding studies and were used as the model for several other statewide evaluations. It is important to note that one-time descriptive studies are valuable, but comparative studies over a period of time which indicate change and growth are more desirable. Since Virginia Commonwealth University conducted the original and second study it was in the best position to measure changes that have occurred since the first and second evaluations. Furthermore, many of the original data gathering instruments could be used again where appropriate, thus accruing considerable savings in the evaluation design.

It is especially appropriate to not only present a picture of the current status of ABE programs, but to present comparative data from the first and second ABE evaluation reports to indicate growth longitudinally and long-range trends. This was a unique advantage of the VCU project.

It is not sufficient to conduct ABE program evaluations every seven years. Program evaluation should be a continuous management tool used by both the state and local level administrators for decision making. This study indicates rather clearly that a lot of important program decisions are based on popular opinions and administrative expediency. There is very little formative evaluation feedback on the local level and the state level administrative staff does not have a systematic plan for conducting meaningful research and evaluation.

The 310 funding procedures are being used for one-shot, sporadic types of research and demonstrations. Each local program should budget a portion of their program allocation for evaluation activities and the State level staff should plan some long-range cumulative research and evaluation projects. As emphasized earlier, an advisory committee would be invaluable in establishing longitudinal research priorities and plans.

There is little evidence to indicate that any systematic program evaluation is being conducted by the state or local ABE staffs. The problem appears to be the lack of a systematic program planning process that includes all of the necessary programmatic steps from needs assessment through program evaluation.

Methodology

General Design. This was a longitudinal program evaluation which compared data from studies conducted in 1970, 1978, and 1985. All three studies

looked at the same variables for ABE state staff and local delivery personnel and students. The evaluation was primarily summative.

Data Collection. All instruments were updated and revised by the Evaluation Advisory Committee. The instruments used included questionnaires, interview guides, data check sheets, and data summary sheets of various types for each population studied. Personal interviews were conducted with all members of the State staff, and written response to the 1978 Evaluation Recommendations were obtained.

The data was collected using the revised and updated instruments. The evaluation director, evaluation staff, state and local level ABE administrators, supervisors, teachers, counselors, aides, and students participated in the data collection procedures. The local ABE supervisors and teachers were responsible for dissemination and collection of local program forms.

Data Processing. All data collection instruments were designed for computer processing and analysis. All the data treatments were completed with existing computer programs and with special programs written by university data processing staff. The University's Institute of Statistics advised the project director concerning proper statistical treatments.

The raw data was keypunched and verified on magnetic tape in an 80-column card format for processing by the University Computer Center.

Data Collection Summary. Most of the data was collected with interview guides, questionnaires, and data check sheets. The total populations were used for all supervisory personnel and counselors. Random samples were drawn from the teacher, teacher aide and student populations.

The overall return from the survey phases of the study was 81%. The non-respondents numbered 19% of the total population. The non-respondents were followed up with letters and telephone calls. In general, the State Department and local program personnel were most cooperative in collecting the data requested.

Description of the Data

All data was computer analyzed. Means, S.D.s and significance of differences were computed between the 1970 and 1985 data. Correlations were computed between selected ABE supervision and teacher's returns. The data was summarized and reported in eighty tables. Recommendations for changes were made for all the variables and populations studied. Some forty-five recommendations were made based on the data analysis. The total evaluation report contains 160 pages. A summary of selected findings, conclusion and recommendation has been prepared as a 71 page report. Space prohibits actual presentation of the data in these conference proceedings. Copies of the total report may be obtained from the author.

Conclusions

As a result of this longitudinal evaluation study, forty-five (45) recommendations for change were made. Selected recommendations follow:

Procedures for Setting 310 Funding Priorities. Periodic needs assessments should be conducted to determine 310 priorities. Data should be obtained from state staff, PPC, local programs, institution of higher education, National Advisory Council, and the professional literature in adult education. The priorities should be ranked and continued until data indicates the

problem has been solved or the need met. Priorities should be carefully screened to determine if another state has already studied or solved the problem. Numerous examples exist of several states solving the same problem. In many cases the solution could be shared and implemented with slight or no modification.

Monitoring Procedures for 310 Funding. Criteria should be developed for ranking proposals and determining the ability and capacity of the grantee to conduct the proposed project. Monitoring should be conducted on a periodic basis by an objective party. It is a difficult or impossible role to be an advocate, e.g., technical assistant and a monitor evaluator at the same time. Perhaps the staff should monitor as a group, and individual supervisors should monitor projects other than those in their area. Part of this problem stems from lack of staff, thus reinforcing the previous recommendation for adequate supervisory staff.

Student Personnel Services. Part-time trained counselors should be hired by each program based on a formula of students enrolled. It is most evident that this population needs individual testing, counseling, placement, and follow-up. If the ABE teacher must perform the student personnel functions, then special inservice training should be provided in testing and counseling techniques.

Student personnel services are as important as instruction and complement each other. The high dropout rate among ABE students is probably attributable, in part, to inadequate student personnel services. Teacher allocation formulas should take into account the demands of performing student personnel functions as well as instruction. Either provide the teachers with adequate time to provide student personnel services or hire part-time student personnel workers.

Program Facilities--Class Locations. The previous recommendation is still valid. Continuing efforts should be made to move ABE classes out of elementary schools for obvious psychological and physical reasons. More utilization of community colleges, churches, voc.-tech. centers, and neighborhood centers should be explored.

Instructional Techniques. Audio-visual presentations have steadily declined over the past fifteen years. Efforts should be made to locate and disseminate appropriate films, filmstrips, audio tapes, records, and video-tapes. These are valuable teaching resources. An audio-visual library should be established that loans AV materials for adult teachers and students.

Staff Training. More local participation in cluster training and regional workshops should be promoted. Funds should be allocated from local programs to allow more teachers to participate in SAIL and/or other statewide and regional training programs. Delivery systems and packages for local in-service training should be developed and implemented. Funds should be allocated for required minimal levels of local training activities.

Reasons for Non-Participation. Local needs assessments should be conducted in the non-participating school divisions. Given the census data, it is difficult to accept the concept that no need exists. The needs assessment data should be presented to the non-participating school divisions, and citizens' groups should request that programs be established. If the

non-participating school division maintains its position, then an alternative delivery system should be funded, e.g., non-profit institution, college, community college, church, professional organization, etc.

Local ABE Supervisors - Types of Endorsements. ABE supervisory positions should be filled with personnel having training and experience with adult education. Persons with unrelated endorsements should only be hired if no one else is available. Consideration should be given to persons with special education endorsements. ABE is a form of special education, and many students have learning difficulties.

Efforts should be continued to initiate an endorsement for adult education. Until such time as personnel with adult education training are available, positions should be filled from closely related areas of vocational education, industrial education, reading, special education, etc.

Time Allocated to Specific Activities. Support services and aides should be provided to conduct the non-instructional activities of the teacher. The teacher should spend 80-90% of their time teaching and the remainder on instructional-related activities.

The ABE Student. Literacy training and vocational skill training should be combined or closely coordinated. The ABE student should receive both literacy training and vocational skill training if desired.

Increased efforts should be made to attract the unemployed male. Opportunities for "on the job training" and cooperative literacy programs in local businesses and industries should be promoted. Literacy training should be linked with occupational skill training whenever possible.

Public School Achievement Levels. If not already in place, a state-wide policy should be developed that provides the local ABE programs with quarterly notices of public school dropouts. These students should be encouraged to return to public school or enroll in the ABE program. The public school guidance counselors should follow-up dropouts and encourage them to enroll in the local ABE program. Dropout names and addresses would be a rich source for ABE program recruitment.

Reasons for Leaving School. As previously recommended in 1978, procedures should be modified to obtain notification from the public school system of all high school dropouts who are legally qualified to participate in the ABE program, i.e., 16 years of age. These dropouts should be recruited to resume their studies toward a high school equivalency as soon as possible. Many dropouts leave school because they are unable to function in that type of rigidly structured environment. ABE learning centers with flexible, individually designed and scheduled instructional programs are ideal for accommodating students' work schedules.

Special recruitment efforts and programs should be developed to salvage the dropouts as soon as possible after separation from the public secondary system. The secondary schools should make provisions for referral to the ABE program and allow transfer back and forth between the two programs with acceptance and credit for work completed in the ABE program. Further study of the causes of dropouts should be made for further verification of these findings.

It is quite possible that the ABE program can salvage numerous dropouts with short-term problems and return them to the secondary system with very

little or no loss in achievement. Several students have exhibited achievement in the ABE learning centers far superior to their high school achievement record.

Post-School Training. Attention should be given to learning skills. This important area should be added to the ABE curriculum. The learning skills area should include study habits, scheduling time, listening skills, note taking, review techniques, and various other learning strategies that can be employed to improve learning in reading, computation, citizenship, home and family life, etc.

Transportation. Transportation alternatives should be provided for those students who are not within walking distance of the program. Car pools, bus passes, etc., should be established and provided for those students who meet low income and welfare criteria or who can provide evidence of their inability to attend classes because of transportation expenses. Students, recruiters, teachers, aides, etc., should be reimbursed at the current state mileage allowance for transporting eligible students to and from the program.

Student Progress. Adult Basic Education will never reach its remedial goal of literacy for all citizens until adequate funding is provided for full-time ABE programs with full-time ABE supervisors and teachers. The part-time piecemeal approach, while making progress, will never solve the obvious problem and its degrading and costly consequences.

Current and Overall Progress. Those students who are not making satisfactory progress in the ABE program should be given special diagnostic attention to determine the reasons for lack of progress. The types of problems hindering progress should be identified, e.g., learning difficulty, emotional, financial, health, etc. Analysis of instructional techniques, methods, materials, and personnel should be made in determining the causes of unsatisfactory achievement.

Local Advisory Committees. Each local program that does not have a program advisory committee should be requested to form one. Model or sample committees from other programs should be given to non-committee programs as examples. The benefits of a program advisory committee should be emphasized to those programs.

Cooperation with Related Agencies. The one-third that feels that cooperation and services from related agencies are inadequate should be contacted to determine the nature of the problem. Related agencies should be informed about the goals and purposes of the ABE program and also the services it provides. A previous recommendation (1978) suggested the development of an Agency Directory describing location, services provided, contact person, and telephone numbers. Representatives from related agencies should be appointed to local advisory committees. Students should also be made aware of related services and referred to appropriate agencies for assistance with particular problems.

Recruitment Procedures - Access to Mass Media. Local programs should make increased efforts to use public time and to take advantage of publicity opportunities through the mass media. Public domain programs should be broadcast, and prepared publicity formats should be shared through the State

Department. Again, mass media is costly; however, there are a number of cheap and free opportunities available.

Student Recruitment. Each local program, if it does not have a trained counselor, should assign a staff member other than the teacher to the combined student personnel activities of recruitment, follow-up of absentees and drop-outs, and test administration and scoring. This person could be a trained para-professional or a successful ABE student.

Staff Ratings of Current Testing Programs. The State Department should recommend a battery of evaluative instruments that can be administered and interpreted by teachers and aides. The battery should include, in addition to diagnostic and achievement tests, a variety of interest, attitude, study skills, and career exploration inventories. The local test battery should also include instruments to identify learning disabilities, which are frequent in the ABE population.

Follow-up Activities. Given the high dropout and absentee rates among ABE students, it seems urgent that more attention be given to this problem. Guidelines should be given to local programs for minimum follow-up activities. Local programs should be encouraged to assign follow-up responsibilities to a staff member. Teachers and aides or a successful student should contact all absentees at least once per week in order to encourage their return to the program and to identify problems that prevent their return.

Initial Teacher Orientation. An initial teacher orientation package should be developed and distributed to all local programs. Local supervisors should have the responsibility for giving this package to each new ABE teacher. The package should include local program data and policies, state policies and guidelines, adult learner information, suggested curricula materials, evaluation procedures and suggestions, recommended instructional strategies and methods, student record formats, and referral resources as a minimum. This package should be designed to be used individually or with groups.

Local In-Service Training Priorities. As recommended in two previous studies, a comprehensive in-service training plan should be developed by the State Department. A variety of delivery systems should be utilized from independent study packages to workshops and conferences. The plan should be based on an up-to-date needs assessment of local in-service priorities. There should be a logical progression of the training events rather than one-shot crisis training.

The comprehensive plan should identify what will be done state-wide, regionally, and locally. Local programs should hold in-service sessions at least quarterly. Ideally, one day a month should be devoted to in-service training. Local programs should allocate allowable funds for local training to complement the other 310 projects and state-conducted training sessions.

Program Evaluation and Review. The State should develop a needs assessment process for local use that would also yield needs data for state use when summarized. A simple program evaluation design should be disseminated to the local programs to collect evaluation data on the following minimum factors: facilities, staff, students, instructional materials, instructional strategies. This local data could be summarized and used for program planning purposes at both the state and local levels.

AN ANALYSIS OF THE COGNITIVE PROFILES OF SELECTED UNIVERSITY ADULT STUDENTS

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Abstract: This report presents results of an exploratory study designed to determine the cognitive profiles of selected university adult students. The study extends previous research on cognitive styles from a unidimensional approach to a multidimensional approach.

INTRODUCTION

For many years, researchers interested in the phenomenon of learning have focused attention on such factors as teacher behavior, curriculum emphasis, and physical aspects of the classroom. The prevailing feeling was that academic performance could be dramatically improved by attending to such factors. More recently, researchers have begun to look beyond environmental and behavioral factors that influence learning to the more fundamental aspects of learning such as perception and cognition. This shift in focus has resulted in numerous investigations regarding the processes of learning.

One area in particular that has emerged from such investigations is the identification of basic cognitive processes and abilities called cognitive styles. According to Messick, cognitive styles refer to information processing habits which represent "a person's typical modes of perceiving, remembering, thinking, and problem solving" (1976, p. 5). They are "ways in which an individual perceives, gathers, and processes information in order to learn, solve problems, work, relate to others, raise children, act in groups, or participate in groups" (Even, 1982, p. 14). Stated another way, cognitive styles are indicative of how an individual learns.

Researchers during the past three decades have been able to identify a number of such styles including: field dependence/independence (Witkin, et. al., 1962), scanning (Gardner, 1962), breadth of categorization (Kogan and Wallach, 1964), cognitive complexity (Bieri, et. al., 1966), selective/impulsive (Kagan, 1965), sharpening/leveling (Gardner, et. al., 1959), and tolerance for ambiguous information (Klein, et. al., 1962).

According to Letteri (1976), "these cognitive styles or dimensions would appear to be the basis for how an individual perceives stimulus situations and, therefore, determines what the individual perceives. They indicate how the individual processes information thus perceived and, therefore, determine what the individual learns (knowledge, skills, values)" (p. 65). As a result, the individual's reactions, behavior, and performance would be partially predicted from knowledge of cognitive style.

Two problems have emerged in relation to this research. First, a unidimensional approach of relating one or two measures of cognitive style to other variables does not provide the investigator with a complete picture of the cognitive processes being employed in a learning task. In fact, only a partial and often misleading picture is given. Because several conditions contribute to a behavior, it is essential to examine the relationship between several cognitive style dimensions and their combined effect on certain behaviors. Work by Letteri (1976, 1979, 1980, 1982) and Kuntz and Letteri (1981) has focused attention on this problem and has served to develop a "cognitive profile" that places an individual on a three-level continuum using the seven cognitive style dimensions described above. By placing an individual on such a continuum, the researcher is in a better position to study and understand the interactive relationships that exist among and between the various cognitive style dimensions and their combined impact on performance such as academic achievement. It also provides a broader appraisal of a person's combined cognitive activity involved in typical learning tasks such as remembering, selecting, comparing, focusing, reflecting, and analyzing (Kuntz and Letteri, 1981).

A second problem with research on cognition and learning processes has been the narrowness of the populations studied. In short, nearly all cognitive research has focused attention on children or adolescents with a few notable exceptions in the literature of adult education (Cawley, Miller, & Milligan, 1976; Simpson, 1981; Walker, 1982; Simpson & Walker, 1983; Fourier, 1984; Tootle, 1985; Simpson & Supapitthayakul, 1986). And, nearly all of this literature has approached cognitive performance from only one dimension (for example, field dependence/independence).

In order to begin addressing the above problems, an exploratory research study was conducted to better understand the cognitive processing styles and skills utilized by selected university adult students. The objectives of the study were 1) to test a sample of randomly selected university adult students using the cognitive style dimensions of Cognitive Complexity-Simplicity, Leveling-Sharpener, Tolerance for Incongruity, Field Dependence-Independence, Category Width, Scanning, and Reflective-Implusive; 2) to analyze the resulting data base of cognitive performance so that mean levels could be developed for later comparison of various adult populations; and, 3) to see if there were any significant relationships between performance on the seven cognitive style dimensions and selected demographic data.

METHODOLOGY

Sample

The population used in this study consisted of adult undergraduate students attending a land grant university located in the Western part of the United States with a student population of 10,000. For purposes of the study, an adult student was defined as anyone 25 years and older enrolled in six or more hours of academic credit during the 1986 Spring semester. Selected demographic data were collected including sex, age, college, Spring semester hours enrolled, major, class standing, annual family income, and whether or not each subject had a diagnosed learning disability.

The sample consisted of 119 randomly selected adult undergraduate students ranging in age from 25 to 70. The overall mean age was 32 years with a mode of 25. Men and women were fairly evenly distributed with 63 or 53% being men and 56 or 47% women. All six colleges that teach undergraduate courses were represented with Education and Arts and Sciences students comprising the largest percentages (29% and 27%) of the sample. The average number of semester hours enrolled was 13 with a range of 6 to 22. Annual family income ranged from \$1000.00 to \$56,000.00 and averaged \$14,482.86. Exactly 60 or 50% of the sample were seniors, 23 or 19% juniors, 16 or 13% sophmores and 7 or 6% were freshman. Eleven or 9% of the sample indicated they were pursuing a second bachelors degree and 2 or 2% indicated other. When asked about diagnosed a learning disability, 97% (115) of the sample indicated no with the remaining 3% (4) indicating yes.

Research Instruments

A battery of seven cognitive style instruments representing the dimensions described above were administered to each study participant. They are briefly identified below:

<u>Dimension</u>	<u>Instrument</u>
1. Field independence vs. field dependence [analytical-global]	Group Embedded Figures Test (Witkin, 1962)
2. Scanning [focus-nonfocus]	Disc (Holzman, 1966; revised by Letteri, 1977)
3. Breadth of categorization [broad-narrow]	Category Width Scale (Pettigrew, 1958; revised by Letteri, 1977)
4. Cognitive complexity vs. simplicity [complex-simple]	Role Construct Repertoire Test (Kelly, 1955; revised by Bieri, 1957)
5. Reflectiveness vs. implusivity [reflective-implusive]	Matching Familiar Figures (Kagan, 1964)

Dimension (cont.)

6. Leveling vs. sharpening
7. Tolerance for unrealistic experiences [tolerant-intolerant]

Instrument (cont.)

Square Lag (Holzman, 1954)
Optical Illusions (Modeled after Klein, 1962)

Data Collection

The study was conducted over a period of five months. A graduate student was recruited and trained in how to administer the seven cognitive tests. This was done to ensure uniformity in test administration. An introductory script was written by the researcher so that potential participants would have some idea of what the study was about before agreeing to participate. Actual testing involved two visits lasting an average of one and one-quarter hours each. The first visit was conducted in a group setting as three of the instruments (Group Embedded Figures Test, Category Width Scale, Role Construct Repertoire Test) lent themselves to group administration. The remaining tests, however, required a second visit for individual testing. The selected demographic data were collected during the first visit.

Data Analysis

Due to the exploratory nature of this study, simple descriptive statistics were used to ascertain overall cognitive profiles. Means and standard deviations were calculated for each of the seven cognitive tests as well as the selected demographic data. The former procedure was done to develop norm tables by which individual performance could be compared to group performance.

A t-test was used to investigate the relationship of the variables sex and semester hours enrolled with the seven cognitive tests. One-way analyses of variance were used to compare the responses to each cognitive style dimension by the demographic variables of age, college, income, and class standing. The Tukey Honestly Significant Difference Test was used for post-hoc analysis with a .05 level of significance.

Finally, chi-square values were calculated to determine if there were any significant relationships between the resulting cognitive profiles and the demographic variables of sex, age, college, semester hours, income, and class standing. Once again, the level of significance was set at .05.

RESULTS

Results of the study are organized according to: 1) cognitive profiles; 2) relationship of cognitive profiles to demographic variables; and, 3) relationship of each cognitive style dimension to demographic variables.

Cognitive Profiles

Prior research by Letteri (1976, 80, 82) with children and adolescents have yielded three specific types of cognitive profiles. These profiles are constructed from performance by subjects across the seven bipolar cognitive style dimensions described earlier (ie. Cognitive Complexity- Simplicity; Leveling- Sharpening; Tolerance for Incongruity; Field Dependence-Independence; Category Width; Scanning; and Reflective-Impulsive). A subject's profile may be arranged according to three levels or types: Type 1, Type 2, and Type 3. A Type 1 profile indicates articulated performance across a majority of the following dimensions: complex, sharpener, tolerant, analytical, narrow, focus, and reflective. A Type 3 profile indicates articulated performance across a majority of the following dimensions: simple, leveler, intolerant, global, broad, nonfocus, and impulsive. A Type 2 profile indicates either a nonarticulated profile at each extreme of the seven cognitive dimensions, or a mixed profile indicating an inconsistent pattern of articulation with no majority matching a Type 1 or Type 3 profile. See Figure 1 for an illustration of three potential profiles.

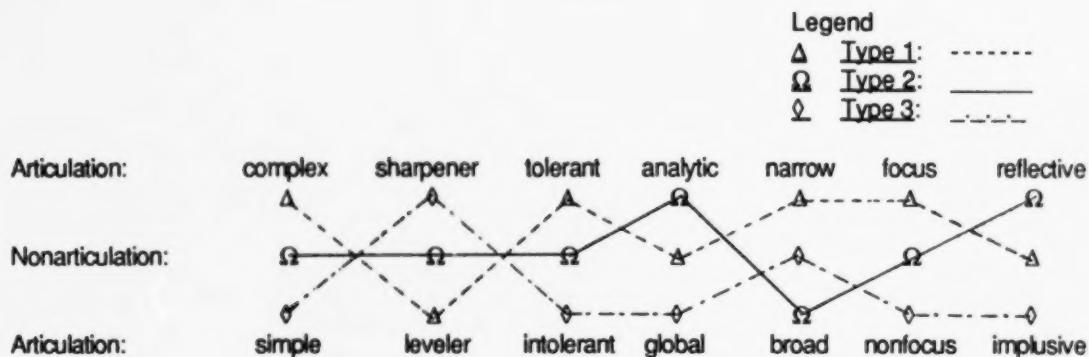


Figure 1. Three cognitive profile types

Norm tables¹ were constructed that enabled each subject to be placed on one of the three specific cognitive profile types. On the basis of this procedure, 17 or 14% of the sample were found to have a Type 1 profile; 87 or 73% of the sample to have a Type 2 profile; and, 15 or 13% of the sample to have a Type 3 profile. These results with selected adult university students reflect a near normal curvilinear distribution, and are consistent with prior research conducted by Letteri (1976, 80, 82) with children and adolescents.

Relationship of Cognitive Profiles to Demographic Variables

After subjects performance on the seven cognitive tests were arranged according to profile type, chi-square values were calculated to see if there were any significant relationships between the profile type and the demographic variables of sex, age, college, semester hours enrolled, income, and class standing. This analysis revealed no statistically significant relationships.

Relationship of Each Cognitive Style Test to Demographic Variables

A t-test was used to study the relationships of each cognitive style test to the variables of sex and semester hours enrolled. This procedure yielded several significant relationships between sex and the cognitive style tests for field dependence/independence ($p < .010$), category width ($p < .009$), and scanning (Total Errors, $p < .007$) (Emotion Ladden Errors, $p < .016$). Specifically, males were more analytical or field independent than females; males were more risk-oriented than females; and, males estimated size more accurately and were less influenced by a distracting background than females. Conversely, females were more global or field dependent than males; females were more cautious than males; and, females estimated size less accurately and were more influenced by a distracting background than males. This is not surprising, given the early modeling and cultural bias that tends to differentiate male and female development (ie. males are taught to manipulate and build objects which reinforces independence, and to be risk takers; females are taught to work together in a nurturing way which reinforces dependence and interdependence, and to be cautious or steady). There were, however, no significant relationships between the number of semester hours enrolled for and scores on the seven cognitive style tests.

The Tukey Honestly Significant Difference Test was used for post hoc comparisons to study the pairwise effects of each cognitive style test and the demographic variables of age, college, semester hours enrolled, income, and class standing. A number of significant relationships emerged for the variables of age and class rank. There were no other significant relationships with the remaining demographic variables.

In order to ensure sufficiently large cell sizes for comparisons, age was collapsed into three groups: Group 1 - 25 to 28 years ($n=42$); Group 2 - 29 to 33 years ($n=40$); Group 3 - 34 to 70 years ($n=37$). Using

¹Norm table data are available from the author.

these groups as the age variable, a significant relationship emerged with the complex/simple dimension ($F=4.343$, $p<.0152$) where group 1 was more complex than group 3. A similar significant relationship was determined with the field dependent/independent dimension ($F= 8.511$, $p<.0091$) where groups 1 and 3 were more analytical or field independent than group 2. Another significant relationship appeared with the category/width dimension ($F= 4.890$; $p<.0091$) where group 2 and 3 were narrower or more cautious than group 1. A fourth and final significant relationship emerged with the reflective/impulsive dimension ($F= 3.412$, $p<.0363$) where group 3 was more reflective than group 1.

In addition, a significant relationship emerged between class standing and the field dependent/independent dimension ($F=6.467$, $p<.0004$) where sophmores were more global or field dependent than juniors, seniors, or 5th year students. There was also a significant relationship between class standing and the scanning dimension ($F= 2.677$, $p<.0505$) where sophmores were more distracted by an emotion laden background than juniors.

SUMMARY and CONCLUSIONS

The purpose of this study was to determine the cognitive profiles of selected university adult students and to relate these findings to selected demographic variables. Prior research by Letteri(1976, 80, 82) and Kuntz and Letteri (1981) with younger populations had determined that it was possible to arrange subjects according to three specific levels or profile types.

In addition, most research dealing with cognitive styles has utilized a unidimensional approach that does not provide the investigator with a complete picture of the cognitive processes being employed in a learning task. By using a multidimensional approach such as the one illustrated in this study, it is possible to achieve a more realistic picture of the cognitive activity involved in learning such as remembering, selecting, comparing, focusing, reflecting, and analyzing. Since little if any research has been done with adult populations, and existing work that has been done with adults have used only one or two cognitive style dimensions, it was determined that such a study was needed.

It can be concluded from this study, that it is possible to test and arrange adult subjects according to performance across seven dimensions of cognitive style. The resulting cognitive profile was shown to yield three articulated levels or profile types. In particular, performance of the 119 university adult students tested revealed three distinct cognitive profiles arranged according to a Type 1 profile (17 or 14% of those tested), a Type 2 profile (87 or 73% of those tested), and a Type 3 profile (15 or 13% of those tested). Also noteworthy is the near normal curvilinear distribution of the sample which is consistent with prior research conducted by Letteri (1976, 80, 82) and Kuntz and Letteri (1981) with younger populations.

No significant relationships were found between the three cognitive profile types and the demographic variables of sex, age, college, semester hours enrolled, income, and class standing. However, when these same variables were examined in relation to each cognitive style dimension, several significant relationships did emerge. In particular, males were more analytical or field independent than females; males were more risk-oriented than females; and males estimated size more accurately and were less influenced by a distracting background than females. Therefore, gender differences may in part account for the variability in performance along these cognitive measures.

Two additional significant relationships were noted between the variables of age and class standing and several cognitive style dimensions. Specifically, younger adult students (25 to 28 years old) were more complex than older adult students (34 to 70 years old). Younger and older adult students were more analytical or field independent than students in the age group 29 to 33. Not surprisingly, older adult students appeared to be more cautious and more reflective than younger adult students. A similar relationship was noted between class standing and field dependence/independence. Here, adult students at the junior, senior, and 5th year class levels were more analytical than sophmore adult students. These results would tend to confirm assumptions about changes in adulthood over the lifespan.

This exploratory study, while modest in scope, has demonstrated the potential of utilizing a multidimensional approach to understanding cognitive performance of adults. Additional research is needed to see if the cognitive profiles are predictive of academic and standardized performance as prior research with children and adolescents have indicated (Letteri, 1980). Research is also needed to study how cognitive performance can be augmented or improved. The cognitive profile provides a sound theoretical base from which to continue such research.

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THE CLASSROOM LEARNING SCALE: A CRITERION MEASURE OF THE ODDI CONTINUING LEARNING INVENTORY

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ABSTRACT

Self-direction in learning has become very popular in the past ten years. Researchers and others are interested in instruments that measure the phenomenon. Oddi's OCLI is one such instrument. This study provides some validation information regarding the instrument.

INTRODUCTION

The concept of self-direction in learning began to appear in adult education literature as early as 1926 (Brookfield, 1985). However, the explosion of information related to the concept has been phenomenal in the past decade. The Commission of Professors of Adult Education recently approved formation of a task force on self-directed learning. A national symposium in 1986 on self-directed learning at the University of Georgia demonstrated that a body of knowledge regarding the topic exists in North America and increasingly elsewhere (Brookfield, 1984). This body of knowledge has impacted on practice in many ways and will continue to do so for some time to come.

Much of this base has stemmed from research on learning projects begun in 1966 by Tough (1967, 1979). Tough determined that most adults spend as much as 700 or more hours in deliberate learning projects each year. Nearly two-thirds of his original sample reported these projects were self-planned. Many subsequent studies have substantiated these original findings. Cross (1981) provided some summary information and noted that almost every adult undertakes learning each year with the majority self planned.

Guglielmino completed some research (1977) aimed at taking the body of knowledge a step further. She designed the SDLRS (Self-Directed Learning Readiness Scale) to determine a person's readiness for self-directed involvement. The SDLRS met the needs of many researchers for a device to measure some aspect of self-directedness and has been used frequently in the past eight years. There have been several efforts to validate the SDLRS (Guglielmino, 1977; Hassan, 1981; Long & Agyekum, 1984; Sabbaghian, 1979; Torrance & Mourad, 1978), with most such research reporting some conflicting results but generally acceptable validation results. However, Brockett (1983, 1985) reported on difficulties encountered in administering the SDLRS to certain groups. His work demonstrated the need to move with caution in utilizing new instruments.

Oddi (1986) has developed another such instrument. The OCLI (Oddi Continuing Learning Inventory) identifies individuals with a disposition to initiate and persist in learning via various modes.

Oddi suggests, "the development of a valid and reliable tool to identify self-directed continuing learners has implications for practice after further validation studies have been conducted, such as potential use as a screening tool to aid in the selection of individuals for various academic and continuing education programs" (1986, p. 105).

THE PROBLEM AND PURPOSE

In light of the heavy interest in self-directed learning, the OCLI has the potential of becoming as attractive as the SDLRS for measuring future aspects of the phenomenon. Unfortunately, other than validation efforts by Oddi, not much is yet known about the instrument. Two studies are currently nearing completion to provide some additional validation information (Landers, in progress; Six, in progress). The purpose of this paper is to present some findings from the latter study.

As part of a larger validation inquiry, action was taken to determine whether or not an obtained score on the OCLI would be a valid predictor of a student's self-directed learning behavior in the classroom. The effort achieved three objectives: (a) the development of the CLS (Classroom Learning Scale) which measures, from the teacher's perspective, a student's self-directed learning behavior in a classroom environment; (b) an estimate of criterion-related validity of the OCLI in predicting classroom behavior; and (c) an estimate of internal consistency of both the OCLI and CLS.

THE HYPOTHESIS

A Conceptual Statement of Relationship

According to Oddi's theoretical formulation, persons who perceive themselves to be self-directed will initiate and persist in such learning via various modes. Consequently, it seems reasonable to predict that students with strong dispositions for being responsible for their own learning will initiate within a semester behaviors consistent with self-directedness in learning and observable by teachers.

Does the OCLI have predictive validity for a classroom setting? One way of answering this would be to see if OCLI scores co-vary with CLS scores. That is, if the OCLI predicts self-directedness in classroom learning, then students should exhibit behavior consistent with the concept of self-directed learning. This may be stated more formally as follows:

Null Hypothesis. For the validation study sample, the correlation coefficient between OCLI and CLS scores equals zero.

Alternative Hypothesis. For the validation study sample, the correlation coefficient between OCLI and CLS scores is not equal to zero.

Hypothesis Testing Framework

Test Statistic. Since co-variation of interval measures was the testing focus, use of the Pearson Product-Moment Correlation Coefficient as the test statistic was judged appropriate.

Significance Level. The alpha level was set at less than .05. For 36 observations the $p < .05$ ($df = n - 2$) is obtained when the correlation coefficient exceeds +0.349 or is less than -0.349. Thus, a true null hypothesis is likely to be retained at least 95% of the time and there is a modest risk of making a Type I Error.

Decision Rule. The rule was comprised of two decision options: (a) reject the null hypothesis if the test statistic is greater than +0.349 or less than -0.349; (b) Retain the null hypothesis if the probability of the test statistic is greater than or equal to .05.

METHODOLOGY

Validation Study Sample

Students and faculty of the Syracuse Business College (SBC -- a fictitious name) composed the target population. The institution is a two year, degree granting, private post-secondary business college located in central New York. Job placement is one of its major goals; its claim on society's support lies in a purpose to enable graduates to obtain employment. However, SBC does not have a comprehensive policy regarding student and instructional staff opportunities for self-directed learning. Thirty-six students from one of two major academic program areas and 17 faculty members participated in this portion of the validation study.

Procedures

First, a nonprobability sample of 328 student volunteers (36% of the student population) completed the OCLI five weeks after the 1986 Fall Semester began. The OCLI is a 24-item objective measure designed to identify self-directed learners. As a self-report instrument, it provides a seven point Likert-type set of response options. The highest score obtainable is 168 and the lowest equals 24. Higher scores mean greater potential for being a self-directed learner. The total score was used as an estimate of a student's self-directedness. Likewise, selected demographic information was gathered.

Second, it was assumed that the most reasonable way to measure student self-directed learning behavior was to ask teachers to rate their students on a uniform standard of measurement. Since no suitable rating scale was found, the CLS was constructed. Q-Technique was deployed in a development process by which a 11-item five point Likert-type scale evolved. "The student... initiates additional learning activities" and "... takes advantage of opportunities to direct own learning" are examples of rating scale item statements.

Third, 36 completed OCLI instruments were drawn at random

from an eligibility pool of 114 Business Administration students. Seventeen faculty members were then identified and linked to students by means of student identification numbers and course schedules. The rating load per faculty member did not exceed nine students. Furthermore, the loading assignment pattern made it possible to achieve a triangulation of CLS ratings on each student.

Fourth, about six weeks after completing the OCLI, each of the 36 students was rated on the CLS by three faculty members; three sets of independent scores were pooled and an average represented a student's CLS score. CLS scores range from 11 to 55. Higher scores mean a student manifests more self-directed learning behaviors.

DESCRIPTION OF THE DATA

Demographic Variables

Student Participants. Questions and data pertaining to selected demographic variables are summarized as follows:

1. Gender. Data indicated that 28% were male and 72% female.
2. Age. The mean age equalled 19.6 years ($SD = 3.7$). The minimum and maximum ages were 18 and 34 respectively.
3. Race. Four groups were represented: (a) White (83%); (b) Black (8%); (c) Hispanic (6%); and (d) Native American (3%).
4. Education. Students with a GED equalled 19% while those with a regular high school diploma comprised 81%.
5. Employment Status. Some 64% indicated they were currently employed.
6. Semester Credit Load. All participants carried at least 15 credits (SBC recognized them as full time students).
7. Major Program of Study. Business Administration majors.
8. Credits Earned at SBC. Total credits earned indicated exposure to the SBC instructional environment. The mean was 6.17 credits ($SD = 15.08$) and 80% had earned no credits.

Faculty Participants. The data are as follows:

1. Gender. Data indicated that 41% were male and 59% were female.
2. Age. The mean age equalled 40.41 years ($SD = 11$). The minimum and maximum ages were 26 and 64 respectively.
3. Race. All were white.
4. Education: Faculty members with at least a BS or BA equalled 53%; graduate degrees equalled 47%.
5. Faculty Position. Some 53% held a general faculty position and 47% were associated with the Business Administration staff.
6. SBC Teaching Experience. They had an average of 6.82 years of teaching experience at SBC ($SD = 7.14$).
7. Rating Task Load. The CLS rating task load averaged 6.29 ($SD = 2.70$). The minimum and maximum loads were 1 and 9 respectively.
8. CLS Ratings. The average score was 26.81 ($SD = 5.64$); minimum and maximum scores were 16.13 and 38.00.

An Estimate of Reliability

Reliability is the consistency with which an instrument measures a particular variable or construct. In a statistical assessment of instruments, Cronback's alpha is perhaps the most popular estimate of reliability. While reliability coefficients vary in magnitude, the most commonly used criterion level is .70. Thus, the items composing an instrument have much in common when the estimate of reliability is greater than .70. Coefficient alpha (an estimate of internal consistency) for the OCLI equalled .7704. The estimate of internal consistency for the CLS was .9139.

OCLI and CLS Scores

An investigation of the relationship between student OCLI and CLS scores obtained a criterion-referenced validity coefficient of $r = 0.14216$. The probability of this test statistic is .4082. Table 1 summarizes this analysis.

Presented in another dimension, the square of the correlation ($.14216^2 = .02$) represents the proportion of variance of either variable that could be predicted by the other and not by any other variable, i.e., 2% of the CLS variation is predictable from the OCLI scores and vice versa. Given the magnitude of the test statistic, the null hypothesis was retained.

Table 1. Criterion-Referenced Validity Coefficient

Instrument	n	Mean	Standard Deviation	Std Error of Mean	Validity Coefficient
OCLI	36	113.75	13.82	2.30	.14216*
CLS	36	27.01	7.26	1.21	

* The probability of this test statistic equals .4082.

Additional Analysis

Utilizing data provided by the demographic variables, additional analysis was conducted by applying correlation and t-test procedures. The obtained correlation coefficients and t-test statistics failed to achieve significance at the $p < .05$ level.

CONCLUSIONS

There were three major conclusions drawn from this study. First, for the study sample, the OCLI is not a predictive measure of self-directed learning behavior in the classroom. Second, neither instrument (OCLI and CLS) is sensitive to selected demographic features of study participants (e.g., gender, age, race, etc.).

Third, the OCLI and CLS are consistent measures of their respective variables. Statistically, the CLS appears to be the stronger of the two. However, the OCLI has demonstrated consistency across populations (e.g., Oddi obtained an internal consistency estimate of .875; Landers obtained an estimate of .772).

Future Considerations

If the OCLI is to be used in practice as a predictive measure of classroom self-directed learning, practitioners would be well served by first obtaining an estimate of the inventory's predictive validity for any population. Finally, is the manifestation of self-directed behavior in a classroom dependent on a learning environment that consistently encourages and rewards such behavior?

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TOWARD A CAUSAL MODEL OF PROGRAM FAILURE IN ADULT EDUCATION

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Abstract

The model presented in this paper suggests causal relationships between specific planning actions or deficits and four distinct types of program failures. It represents one product of an ongoing research project designed to promote a deeper understanding of the program planning process through empirical investigation of unsuccessful adult education programs.

Background

Empirical investigations of the program planning process in adult education have largely focused on discovering what steps, tasks, or decisions are included and in what order they are addressed. Theoretical work on program planning has produced a plethora of normative models each of which describes one author's perspective on how planning should occur (Sork & Euskey, 1986). Consequently, the literature contains a great deal of advice about how to plan programs and a few observations about how planning occurs in specific settings. What has been missing from the literature is theoretical or empirical work that links specific planning actions with outcomes of planning.

Although the preferred outcome of educational planning is **successful** programs, the focus of this research was **unsuccessful** programs. More specifically, the purpose of this research was to construct a tentative causal model that identifies factors contributing to four distinct types of program failures. If the factors that account for program failures can be identified and their relative influence determined, then it should be possible to construct planning strategies that reduce the incidence of program failures (Sork, 1986).

Four Types of Planning Failures

Based on the work of Sork (1981) and Martin-Lindgren and Varcoe (1986), Sork, Kalef and Worsfold (1987) have differentiated four types of program failures encountered in adult education practice.

Type 1 Failure

Planning for the program is **partially** completed but is terminated before implementation. Organizational resources are expended on planning with the full intention of offering a program, but for some reason a decision is made to terminate planning.

In determining Type 1 Failures it is important to realize that there are natural points in the process when decisions are made to terminate planning. In order to be considered a Type 1 Failure the termination must take place after the usual point in the process when disengagement from planning normally occurs. The "usual point" may vary from one organization to another and, within a specific

organization, from one planning situation to another. It should be expected that some planning activities will terminate before a program takes final form because it often requires extended discussion and some information gathering before it becomes apparent that a program idea is not viable or that a client interest is too weak or not directly relevant to the mandate of the organization.

Type 2 Failure

Planning for the program is completed and the offering is publicized, but it does not attract sufficient enrollments or registrations and is therefore cancelled.

It can be argued that a certain proportion of Type 2 Failures should be expected in any organization. In fact, some would say that an absence of Type 2 Failures indicates that the organization is playing it safe by only offering programs for which there is a demonstrated demand. Some organizations may not only tolerate Type 2 Failures, they may encourage them—at least until their numbers approach some acceptable proportion of successful programs. Although such practices may be tolerated within the organization, the failures do represent lost resources that could be devoted to successful programs.

Type 3 Failure

Planning for the program is completed, the offering is publicized, and enough people enroll so the program is offered. But the program does not provide what the participants had expected so they either fail to complete the program (drop out) or they react so negatively to it that no consideration is given to offering the program again in its original form.

Experienced program administrators are aware that there is some negative reaction to most programs. Negative reaction to a program must exceed the level that is acceptable to the organization before a program is considered a Type 3 Failure. Although there may be other ways that negative reactions are expressed, the two most common sources are (1) oral or written statements of dissatisfaction from participants and (2) intellectual or physical dropout from the program.

Type 4 Failure

The program is offered and the participants express satisfaction, but there is clear evidence that the program failed to achieve the objectives for which it was designed. Although some useful learning may have been a consequence of the program, and may account for the satisfaction expressed by the participants, the learning does not correspond with the objectives of the program.

Because objectives are often unstated and because they frequently change while a program is underway, identifying Type 4 Failures can be difficult. It is the intended outcomes or benefits of the program at the time the program ends that are of concern. Indicators of Type 4 Failures include the inability of participants to correctly answer questions, perform tasks, solve problems, or otherwise demonstrate that learning has occurred, and comments from those who observe the post-program activities of participants indicating that expected outcomes or benefits of the program were not realized.

Contributing Factors

The contributing factors identified below for each type of program failure represent a tentative inventory rather than a validated listing. On first reading it may not be obvious that some of these factors are related directly to the planning process. However, on closer examination it should become apparent that each factor suggests one or more flaws in planning that can be corrected. In some cases the factors were derived from speculations or analyses found in the literature. In other cases the factors were generated through postmortem audits in which the author participated. Until further data are available it will not be possible to validate the inventory or to establish the relative influence of each factor in explaining why program failures occur.

Type 1 Failures

Type 1 Failures are discussed only indirectly in the program planning literature. Identifying contributing factors involves reflecting on instances of this type of failure and speculating on the reasons why the failure occurred. Based on a small number of such analyses, the following factors are presented as those most often responsible for Type 1 Failures:

- Agency goals or mandate not clear
- Client system(s) not well defined
- No consensus on focus of program
- Incomplete knowledge of resource constraints
- Responsibilities of those involved not defined
- Tentative design too costly
- Tentative design too complex
- Lack of follow through

Type 2 Failures

There have been several useful analyses of Type 2 Failures reported in the literature. Hanson (1982) analyzed the factors contributing to the cancellation of a continuing education program on "Effective Communication in Pharmacy." He not only speculated on the reasons for insufficient enrollment, but also surveyed the client group to find out why they had not registered for the program. Smith (1974, 1975) reported on two Type 2 Failures—an educational travel program and a mid-life career change program for males over forty. The following list represents an integration of factors suggested by Hanson and Smith and several others produced from postmortem audits:

- Inappropriate pricing
- Inappropriate scheduling
- Inappropriate location
- Not of interest to client group
- Poorly focused promotion
- Poorly timed promotion
- Competition more attractive
- Market saturation
- Inadequate support services
- Mismatch between agency and program

Type 3 Failures

Lewis and Fockler (1976) analyzed a Type 3 Failure that occurred during the pilot-testing of a program designed for experienced sales representatives of a pharmaceutical company. Their analysis focused on a single factor to explain the failure—a mismatch between content and client needs. It seems prudent to classify as overly simplistic single-factor explanations for any type of program failure. The following list contains factors contributing to Type 3 Failures as identified through postmortem audits:

- Poor instructor(s)
- Poor administration
- Unclear objectives
- Mismatch between content and client needs
- Too elementary
- Too advanced
- Inappropriate instructional methods
- Poor quality of noninstructional resources
- Misleading advertising

Type 4 Failures

No analyses of Type 4 Failures have been located in the literature. Indeed, since so many adult education providers consider a program successful if the participants are reasonably satisfied, it may be difficult to find acknowledged cases of Type 4 Failures. Nevertheless, this type of failure is quite serious for those adult educators concerned about the efficacy of their programs. The following factors were identified during discussions with practitioners and through a small number of postmortem audits that included Type 4 Failures:

- Ineffective instruction
- Unclear objectives
- Miscommunication of objectives
- Too many objectives
- Unrealistic expectations
- Mismatch between objectives and instructional methods
- Inadequate provision for transfer of learning

Constructing the Model

It should be restated here that the contributing factors listed above represent a tentative, unvalidated inventory. As additional postmortem audits are completed, the lists will be revised and the relative influence of each factor will be determined. Figure 1 represents the model that is guiding this research. Contributing factors for each type of program failure will first be validated with data from postmortem audits. After the factors and their relative influence on program failures are determined, the costs and consequences of each type of failure will be specified. As more data accumulates the level of confidence attached to the proposed causal linkages can be assessed. If a validated model can be produced, then theory can emphasize those elements of planning that require careful attention if reducing the incidence of program failures is a valued goal.

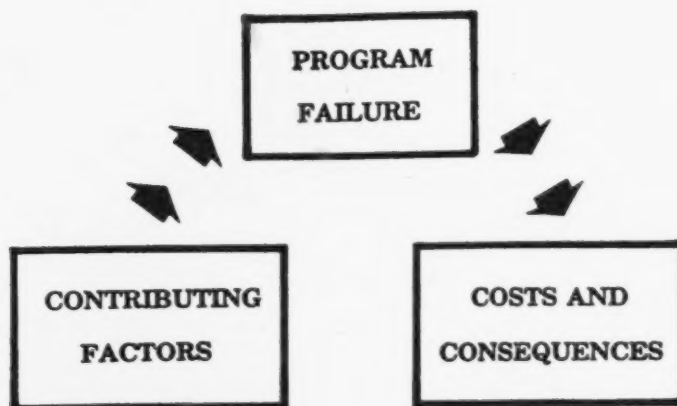


Figure 1. Basic structure for causal model of program failure.

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CONCEPTIONS AND DECEPTIONS: RESEARCH INTO THE ISSUE OF NON-PARTICIPATION

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ABSTRACT: Reconceptualization of the issue of non-participation in terms of people's 'common-sense understandings' of their worlds results in new understandings of the phenomenon.

Research into the phenomenon of participation in adult education is not new. Indeed, as Douglass and Moss observed, "if volume of writing can be taken as an index, participation must rank as one of the major concerns of adult educators" (1968, p. 247). That research has revealed two dimensions of participation which have remained consistent since the earliest systematic investigations into the issue in the 1920's. First, it is clear that, although participation rates have increased in the last two decades, the majority of North Americans did not and still do not participate in adult education. Second, there are distinctive differences between the characteristics of those who participate and those who do not. Participants are more likely to be educated and occupy professional, white-collar occupations, whereas non-participants typically, possess lower educational levels and occupy manual, blue-collar positions.

The forces which have fostered research into these two dimensions, although strong, rest on the unsubstantiated assumption that education benefits both society and the individual. In terms of society there is a belief that a skilled, knowledgeable workforce, capable of dealing with rapid technological changes, will ensure the international competitiveness of the nation. An educated workforce is equated to a productive workplace, which in turn is assumed to result in the growth and maintenance of a healthy national economy. These beliefs about adult education parallel the views that were held in the 1960's with regard to education. The serious theoretical and empirical critiques of those views have largely been ignored, however. For individuals, adult education is promoted and often accepted as a means to enhance their situations by providing access to more employment opportunities and better lifestyles. Implicit in the promotion of this belief, is the perspective that adult education performs a role in shaping a more just and equitable society. This notion persists despite evidence that participation in adult education is actually widening the gap between the 'haves' and the 'have nots' (Canadian Association for Adult Education, 1982). These forces, although ambiguous, have generated three research streams which attempt to explain non-participation. All three streams center on the concept of motivation. Since motivation is both a forward-looking disposition to action and at the same time, the purpose or goal of that action, one stream of research relates background factors to participation, the second one focusses on the goals of participation, and the third one examines barriers as possible impediments to realizing those goals. Although the first two streams of research have confirmed that the reasons people participate are complex, multiple and inter-related, a clear explanation of the 'why' of non-participation has not emerged. It is the third stream of research which focusses on barriers that is increasingly viewed as important by researchers.

PARTICIPATION AND BARRIERS: Cross identifies three categories of obstacles which discourage or exclude adults from participating in organized adult education activities as situational, institutional and dispositional. Most research on obstacles and barriers to participation focusses on Cross's first two categories of situational and institutional barriers. Situational barriers are "those arising from one's situation in life at a given time" (Cross, 1981, p. 98). Institutional barriers are obstacles erected and maintained by the providers of educational services. Together, situational and institutional barriers are cited by 20-75% of the respondents to surveys as their major obstacles to participation. Researchers might reasonably assume that if the external situational and institutional barriers were removed, participation would increase significantly. This is not the case, however. The removal of external barriers combined with increased learning opportunities has produced unexpected and unexplained participation results. For example, there have been significant increases in the participation of poorly educated women, but not in the participation of others who are poorly educated. There appears to be a difference between obstacles to participation and obstacles to the wish to participate (Aaltonen, 1979). Further, the notions of situational and institutional barriers do not account for exceptions to the usual participation patterns. Participation by poorly educated, blue collar workers and non-participation by highly educated, professional workers remain unexplained. Such findings have created greater interest in dispositional barriers.

Dispositional barriers are related to attitudes and self-perceptions about oneself as a learner. For example, older people may feel they are too old to learn, the less educated may lack interest in learning or confidence in their ability to learn. The importance of dispositional barriers may well be underestimated since in all likelihood respondents identify the more 'socially acceptable' situational and institutional barriers than dispositional ones (Cross, 1981). As well, respondents who say they are not interested in further education are seldom asked why they lack interest. In view of these factors, researchers increasingly suggest that dispositional barriers play a "central role" (Rubenson, 1983, p. 7) in the participation issue.

PRESENT PERSPECTIVES: Although participation studies abound, many share similar perspectives which require closer inspection. For example, researchers' preoccupation with the concept of motivation may be primarily useful in providing adult educators with a rationalization to explain undesired behaviors such as non-participation. It lets them 'off the hook' by blaming the learner (Boshier, 1983). This perspective is more apparent in some of the adult education literature than in others. Non-participants are labelled as "the withdrawn, indifferent people" (Douglass, 1970, p. 89), "passive" (Rovan, 1979, p. 50), those who have "an absence of any moral commitment in regard to the opportunities offered" (Lorenzetto, 1979, p. 58). Such a perspective blames the non-participant and suggests they are somehow deficient in comparison to participants. It ignores the possibility that non-participants may make rational decisions concerning their non-enrollment. It also perpetuates the notion that psychological perspectives best explain non-participation and ignores the influence that the existing social structures play in creating and maintaining the phenomenon.

Current research into dispositional barriers, although promising, often displays similar perspectives. It assumes that motivated individuals are prevented from participating by obstacles and that even the less motivated individuals will participate if those barriers are lowered. Supposedly there is a critical balance between obstacles and motivation, and participation results from an overbalance on the side of motivation. In

other words, the literature implies that participants possess more motivation than non-participants.

Obviously motivation, as it is presently construed, does not adequately explain participation and non-participation in organized adult education activities. Present research is able to determine that some individuals participate while others do not, however it does not explore the differences in individuals' purposes and strategies in participating or not participating. Neither does it explain the within-group differences that exist, that is, that some members of groups participate, while others who resemble them do not. Clearly, a reconceptualization of the issues of participation and non-participation from a different perspective is needed in order to gain a clearer understanding of the phenomena.

It is possible, of course, to reconceptualize the issue of non-participation in such a way that it becomes a non-issue. It is simply argued that many adults actually do participate in numerous learning activities, they merely involve themselves in self-directed learning rather than organized adult educational activities (Penland, 1977; Tough, 1978). Further, in these activities the clear class differences between participants and non-participants, so evident in organized adult education activities, are not apparent. To accept this argument, however, is to deceive oneself further, for it redefines the concept of participation in very different terms from those discussed above. As well, the illusion of equality which emerges is misleading, since the lower socio-economic individuals are actually participating in those adult education activities which create the least resources (Rubenson, 1980).

RECONCEPTUALIZING THE ISSUE: Several authors in the adult education literature have hinted at a different answer to the question of why the majority of individuals in general, and the majority of individuals from the lower socio-economic group in particular, do not undertake learning inside a system of organized adult education activities. Mahere, at the 1972 UNESCO conference which focussed on the "forgotten people", spoke of adults who "do not sufficiently feel the need for education" (UNESCO, p. 19). Similarly, Darkenwald and Merriam (1982) write of those who make "negative evaluations of the usefulness, appropriateness and pleasurability of engaging in adult education" (p. 139). Cropley (1984) discusses those who see adult education as "irrelevant to their lives or boring or snobbish" (p. 3788). From these comments, a theme emerges which forms the basis of a new approach to the issue: people's conceptions are basic to their participation or non-participation in adult education.

CONCEPTIONS: In the adult education literature, a confusing array of terms such as views, attitudes, perceptions, evaluations and beliefs are used interchangeably with the term 'conception'. Conceptions are the filters by which individuals interpret their worlds. They are forms of thought or ways of understanding the world. Conceptions are based in common-sense understandings which are defined as "the reality of everyday life" (Berger & Luckmann, 1966, p. 19), and "everything that passes for knowledge in society" (Berger & Luckmann, 1966, p. 13). They help individuals "to find their bearings within their natural and sociocultural environment and to come to terms with it" (Schutz, 1971, p. 6).

Some conceptions are held in common by all members of a particular society or

group. In other words, all members of the society or group view a reality in a similar way. Effective communications within a society or group depend on assumptions, definitions and understandings shared in such a way. On the other hand, within the same society or group different conceptions may also be held among its members. This is possible since different individuals with different experiences interpret the same reality in different ways.

It is possible that different interpretations of the same reality are the result of different dream or fantasy experiences (Schutz, 1964). Different interpretations of the same reality also result from living through daily life occurrences. Accordingly, the nature of the everyday world, the daily environment with which the individual comes in contact, is of paramount importance to the conceptions formed. The reality of that everyday life is socially constructed. It occurs in relation to social structures and is influenced by personal experiences and numerous biographical and inter-subjective understandings (Berger and Luckmann, 1966). Consequently, multiple conceptions develop from the multiple everyday life experiences which occur within objectively similar groups. It is these varying conceptions of a single reality which are "worthwhile studying" (Marton, 1981, p. 181). This research, in which the results are descriptive categories of conceptions, is defensible from two perspectives. First, the study of conceptions is "sufficiently interesting itself, not least because of the pedagogical potentiality and necessity of the field of knowledge to be formed" (Marton, 1981, p. 178). Second, these descriptions cannot be derived from descriptions arrived at with other research approaches. Since empirical research has revealed that there are a limited number of qualitatively different ways in which aspects of reality are experienced or conceptualized, such research is possible (Marton & Säljö, 1976; Säljö, 1981).

CONCEPTIONS AND PARTICIPATION: Important to any study which links conceptions and non-participation is the view that "whatever an individual feels that he knows contributes to his actions..." (Marton, 1981, p.182). Conceptions, or common-sense understandings, "...determine behavior, define the goal of their action, the means available for attaining them..." (Shutz, 1971, p. 6). In other words, observable actions regarding participation are not solely the result of inner psychological processes such as intentions, purposes or motives. Rather, these processes are woven into the action itself and can only be understood by examining the meanings that actors attach to their actions.

Conceptions have two dimensions. They are both the "rationalisations" and the "intentions" for action (Larsson, 1984, p. 126). For a researcher to investigate why individuals do not participate in organized adult education activities is to focus attention on the latter dimension. As Johansson and Ekerwald (1976) note, when asked why they do not enroll, non-participants tend to simply reply "Why should I?" Implicit in their response is the forward-looking nature of their motives. These motives are defined in terms of the end product and its usefulness. These motives focus on non-participants' objects or goals of action rather than the force or disposition underlying the action.

An important research question which results from reconceptualization of the issue of participation and non-participation and which could direct considerable further research is: What are non-participants' conceptions of the functions of organized adult education activities? Such a research question, posed in this way, would make a significant contribution to the existing adult education literature. It would broaden and deepen the

knowledge base concerning the phenomenon of participation. By reconceptualizing the issue, it would provide new insights and challenge assumptions in the present participation literature. It could direct exploration into the diversity and range of conceptions held by a diverse and wide range of people and examine how their conceptions of the functions of adult education influence their participation. It would, by analysing non-participation from a new perspective, provide a basis from which further empirical analysis and testing could be undertaken. Finally, research which approaches and analyses conceptions of the functions of adult education based in the theoretical perspective proposed here will address a current limitation of participation research: the lack of empirical research based in theory (Boshier, 1973; Courtney, 1984; Cross, 1981; Dickinson & Clark, 1975; Rubenson, 1980, 1982).

In summary, reconceptualization of the issue of non-participation from the basis proposed in this paper takes a fundamental step forward in understanding a phenomenon which has challenged researchers since the 1920's. Further, this new perspective, by providing an in-depth understanding of the 'why' behind non-participation, promises to advance and enrich the discipline of adult education.

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LEARNING PATTERNS OF PREGNANT WOMEN

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ABSTRACT: Educators are concerned about the learning patterns and behaviors of pregnant women since behaviors of adequate weight gain, reduced alcohol consumption, and reduced cigarette intake are associated with a healthy pregnancy outcome. One hundred and twenty women were interviewed to identify the relationships between learning patterns, health beliefs, and health behaviors. Results indicated that self-initiated learning about prenatal weight gain was positively correlated with ideal weight gain; whereas, other-initiated learning about prenatal alcohol issues was positively correlated with reduced alcohol consumption. No significant relationship was found between self-initiated learning about prenatal smoking issues and reduction in cigarette intake. Prenatal weight gain health beliefs were found to be significantly correlated with ideal prenatal weight gain; however, prenatal alcohol and smoking beliefs were not significantly correlated with reduced alcohol consumption and reduced cigarette intake.

INTRODUCTION: The purpose of health education is to change behavior and therefore health professionals dealing with pregnant women strive for optimal behaviors associated with a healthy pregnancy outcome. Low maternal weight gain, alcohol consumption, and tobacco use are associated with increased incidence of low birth weight (Institute of Medicine 1985), a principal predictor of perinatal mortality. Therefore, learning about prenatal weight gain, alcohol consumption, and tobacco use is of particular interest to educators.

The purpose of this study was to examine learning behaviors that occur during pregnancy with regard to those variables that are amenable to an education intervention. The central research question was "What are the learning patterns of pregnant women, and what influence do learning and health beliefs have on their prenatal health behaviors?"

STATEMENT OF THE PROBLEM: Adults learn continuously throughout their lives. Havinghurst (1952) pointed out that learning is necessary throughout life because of new developmental tasks that occur during the life cycle. The greatest changes in life prompt learning, and preparation for childbirth would be no exception.

Learning can occur in numerous settings and Jensen classified these settings into two major categories: (1) the natural societal setting, and (2) the formal instructional setting (Verner 1964). Little (1980) states that learning in the natural societal setting can be either fortuitous or intentional, and learning in the formal instructional setting can be directed either by self or by others. In prenatal learning, numerous opportunities are available to pregnant women. Learning could potentially occur in the following settings: (1) in a group setting, whereby women attend prenatal classes, (2) in a one-to-one setting, whereby women discuss prenatal issues with a physician, obstetrician, nurse, dietitian, family member, or friend, and (3) in a self-instructional setting, whereby women read books, articles, or pamphlets; watch television programs or video programs; or listen to radio programs. Experience in the health care field tells us that pregnant women not only seek information about their pregnancy but also receive information incidentally, particularly in the one-to-one setting. An examination of the dynamics surrounding the interactions within the various learning settings could provide educators with an in-depth profile of the learning.

Tough (1979) examined how adults learn and reported, in considerable detail, how adults go about planning their learning activities. One of Tough's major contributions in identifying the process of how adults learn is his typology of planners for various learning projects. The types of planners identified include: *"the learner himself, a group or its leader-instructor, one person in a one-to-one situation, a nonhuman resource, and mixed (that is, no dominant type of planner)"*.

In this study Tough's conceptualization of how adults learn was used as the general framework to identify the learning patterns of pregnant women. By utilizing Tough's framework of planners of the learning, attention is shifted from professionally guided learning to obtaining a more global view of what has occurred during prenatal learning.

The measurement of learning as well as health beliefs may serve as a predictor of whether or not a woman changes her health behaviors during pregnancy as a result of the information she obtains during prenatal learning. The principle hypotheses of this study were that: (1) scores on a self-initiated learning measure will be positively correlated with ideal prenatal weight gain, reduced alcohol consumption, and reduced cigarette intake, and (2) scores on a health belief measure will be positively correlated with ideal prenatal weight gain, reduced alcohol consumption, and reduced cigarette intake.

METHODOLOGY: The objectives of this study were to identify pregnant women's health behaviors, knowledge levels, learning patterns, and health beliefs. This study, an ex post facto design, involved a one hour structured interview with women following delivery of their infants in hospital. A proportional sample of 120 women was randomly selected from seven British Columbia hospitals with average monthly births of greater than 100. Women excluded from the sample were: those identified by the medical staff to have emotional or physical complications, those unable to communicate in English, those experiencing a second or subsequent birth, and those experiencing multiple births.

The development of the structured research interview schedule consisted of a pre-pilot and pilot study conducted with fourteen individuals. Hoyt's estimate of reliability for the knowledge test, using the total sample, was found to be: 0.69 for the prenatal weight gain knowledge subtest (13 items), 0.41 for the prenatal smoking knowledge subtest (5 items), and 0.37 for the prenatal alcohol knowledge subtest (4 items). Hoyt's estimate of reliability for the total knowledge test was 0.64. An affective measure of prenatal health beliefs was developed based upon Hochbaum, Rosenstock, Leventhal, and Kegeles' Health Belief Model (Rosenstock 1974). The affective measure of health beliefs in this study consisted of three components: (1) "motivation" component, defined in terms of women's perceived concerns about their health behaviors, (2) "perceived susceptibility" component, defined in terms of women's perceived risk level of their unborn child in relation to their health behaviors, and (3) "perceived benefits" component, defined in terms of perceived usefulness of the information received in managing their health behaviors. Reliability for the affective health belief measure was found to be: 0.62 for prenatal alcohol beliefs (3 items), 0.38 for prenatal weight gain health beliefs (3 items), and 0.35 for prenatal smoking health beliefs (4 items).

DATA ANALYSES, FINDINGS, AND DISCUSSION: The results of this study will be reported under the following headings: (1) The Research Participants, (2) Prenatal Weight Gain Behaviors, (3) Prenatal Alcohol Behaviors, (4) Prenatal Smoking Behaviors, (5) Knowledge Levels, (6) Learning Patterns, and (7) Health Beliefs.

(1) The Research Participants. Eighty-five percent of the women approached agreed to

¹ Allen Tough, The Adult's Learning Projects (Toronto: The Ontario Institute for Studies in Education, 1979), p.86.

participate in this study. The average age of the women was 26.5 years of age. Twelve percent of the women had less than senior matriculation, 42 percent had senior matriculation, 32 percent had post secondary education, and 14 percent had one or more post secondary degrees. Seventy-six percent of the women were married, 11 percent were living common law, 10 percent were single, and 3 percent were separated or divorced. Ethnicity of the sample varied, reflecting Vancouver's cosmopolitan nature. Eighty-three percent were of Caucasian origin and 17 percent of Asiatic descent.

(2) Prenatal Weight Gain Behaviors. Recommended prenatal weight gain, based upon the British Columbia Ministry of Health Recommendations (McCarthy and Mackay 1984), is twenty-seven pounds for primiparous women. The women in this study gained an average of 33.5 pounds (15 kg) during their pregnancy. Two percent of the sample gained less than ten pounds, 5 percent gained between ten and nineteen pounds, 25 percent gained between twenty and twenty-nine pounds, 38 percent gained between thirty and thirty-nine pounds, 25 percent gained between forty and forty-nine pounds, and 5 percent gained over fifty pounds.

(3) Prenatal Alcohol Behaviors. Seventy-five percent of the women in this study consumed alcoholic beverages prior to their pregnancy. Of those women who consumed alcoholic beverages, the average number of drinks consumed per month was 23 before pregnancy, 9 during the first trimester, 1 during the second trimester, and 2 during the third trimester. One drink was defined as one bottle of beer (355 ml), one bottle of cider (355 ml), 5 ounces of wine (150 ml), 1.5 ounces of liquor (45 ml), or 1.5 ounces of liqueur (45 ml). Of those women who consumed alcoholic beverages, 40 percent quit consuming alcohol during their pregnancy, 17 percent reduced their alcohol consumption, 37 reduced their alcohol consumption in the first trimester then increased their alcohol consumption by the third trimester, 5 percent increased their alcohol consumption, and 1 percent did not change their alcohol consumption.

(4) Prenatal Smoking Behaviors. Thirty-nine percent of the women in this study smoked prior to their pregnancy. Of those women who smoked, the average number of cigarettes smoked daily was 17 prior to pregnancy, 10 during the first trimester, 7 during the second trimester, and 8 during the third trimester. Of those women who smoked, 38 percent of the women quit smoking cigarettes during their pregnancy, 26 percent reduced their cigarette intake, 18 percent reduced their cigarette intake during the first trimester then increased their cigarette intake by the third trimester, 14 percent did not change their cigarette intake, and 4 percent increased their cigarette intake.

(5) Knowledge Levels. Pregnant womens' knowledge levels about prenatal weight gain was significantly correlated with ideal prenatal weight gain ($r=.16$, $p=.038$). Therefore those individuals who had a higher score on the prenatal weight gain knowledge test were more likely to have a weight gain closer to the recommended weight gain. Of those women who consumed alcoholic beverages, knowledge level about prenatal alcohol issues was significantly correlated with reduction in alcohol consumption ($r=.26$, $p=.005$). Therefore those individuals who had a higher score on the prenatal alcohol knowledge test were more likely to reduce their alcohol consumption. No significant relationship was found between knowledge about prenatal smoking issues and reduction in cigarette intake.

(6) Learning Patterns. The average length of time spent in learning and/or discussion about weight gain, alcohol consumption, and tobacco use from all possible sources was forty-one hours. The range was from 36 minutes to 700 hours. Of the total sample 89 percent read a book, 54 percent read an article, and 66 percent read a pamphlet containing prenatal weight gain, alcohol, or smoking information. Seventeen percent watched a television program, 36 percent saw a video program, and 4 percent listened

to a radio program containing prenatal weight gain, alcohol, or smoking information. The average number of books read during pregnancy about these three topics was three, the average number of articles read was five, and the average number of pamphlets read was four. The average number of reading days during the entire pregnancy was fifty-six. Women, on the average, spent one hour reading during one of their reading days. Five percent of the women did not read about prenatal weight gain, alcohol, or smoking issues.

The percentage of the sample who obtained or received information about prenatal weight gain, alcohol, and smoking issues from the various sources of information is summarized in Table 1. The sum of percentages is greater than 100 since the women sought information from more than one source.

TABLE 1
Discussion About Weight, Alcohol, and Smoking

	WEIGHT DISCUSSED	ALCOHOL DISCUSSED	SMOKING DISCUSSED
At Prenatal Class	72 %	74 %	70 %
With Physician	86 %	59 %	57 %
With Obstetrician	20 %	15 %	17 %
With Nurse	14 %	04 %	06 %
With Dietitian	13 %	05 %	03 %
With Family	84 %	43 %	46 %
With Friend	72 %	36 %	29 %

Quality of learning was measured by examining the relationship between self-initiated learning and behavior. A measure of self-initiated learning was calculated by adding the number of self-initiated learning incidents, then dividing the sum by the total number of self-initiated and other-initiated learning incidents. The results of this study showed that self-initiated learning about prenatal weight gain was positively correlated with ideal prenatal weight gain ($r=.15$, $p=.047$). However, self-initiated learning about prenatal alcohol issues was negatively correlated with reduced alcohol consumption ($r=.24$, $p=.01$), and as such other-initiated learning about alcohol was associated with reduced alcohol consumption. The dynamics of the learning process regarding prenatal weight gain and alcohol issues are therefore important factors in the prediction of behavior change. Self-initiated learning about prenatal smoking issues was not significantly correlated with reduced cigarette intake.

(7) Health Beliefs. The mean scores of prenatal weight gain health beliefs, prenatal alcohol health beliefs, and prenatal smoking health beliefs are reported in Table 2. The mean score values are based upon a scale of zero to six. A zero value on the scale is equal to no concerns, no perceived risk, and no perceived use of the information. A six value on the scale is equal to high concerns, high perceived risk, and high perceived use of the information.

TABLE 2
Mean Scores of the Health Belief Model Components

	PRENATAL WEIGHT BELIEFS	PRENATAL ALCOHOL BELIEFS	PRENATAL SMOKING BELIEFS
Concerns	3.24	1.78	3.51
Perceived Risk	1.09	0.90	2.69
Usefulness of information	3.33	3.38	3.16

A measure of prenatal weight gain health beliefs was positively correlated with ideal prenatal weight gain ($r=.15$, $p=.05$). Measures of prenatal alcohol health beliefs and prenatal smoking health beliefs were not significantly correlated with reduced alcohol consumption or reduced cigarette intake. When the three components of the prenatal weight gain health belief measure were included as independent variables in multiple regression analyses, it was found that the component "perceived weight susceptibility" was predictive of ideal prenatal weight gain [R Squared=28%, $F(3,119)=3.48$, $p=.018$]. When the four components of the prenatal smoking health belief measure were included as independent variables in multiple regression analyses, it was found that the component "perceived smoking susceptibility" was predictive of reduced cigarette intake [R Squared=60%, $F(4,38)=5.35$, $p=.0016$]. In this analysis it was found that those individuals who had reduced their cigarette intake were those who perceived their unborn child to be at low risk. This result is in contrast to the relationship predicted by the Health Belief Model whereby individuals who reduced their cigarette intake would be those who perceived their unborn child to be at high risk. A possible explanation of this occurrence may be the retrospective nature of the study. This finding, however, leads to some perplexing questions: "What environmental factors influence the development of the health belief model component perceived smoking susceptibility?", and "To what extent do learning interactions and possible conflicting information from the various sources of information influence the development of this health belief model component?"

CONCLUSIONS. A close examination of the sources of information utilized by pregnant women indicate that family members and friends as well as health professionals are important sources for potential learning. Therefore when educators plan to disseminate prenatal information, their sources should not be limited to health professionals but should also include reaching the lay public in their home and work settings.

An extensive amount of time spent in learning was found to occur during pregnancy. In this study the average length of time spent in learning about weight gain, alcohol, and smoking issues was forty-one hours, whereas Tough's (1985) approximation of the average length of time spent during a typical learning project was 100 hours. This time discrepancy could be diminished if other aspects of the pregnancy, such as learning about labour and delivery, fetal growth, and changing family relationships were included. Weight gain, alcohol, and smoking issues are only one part of the total learning that occurs during pregnancy.

Examining the time adults spend in learning without investigating the quality of the learning has been one of the major criticisms of the research conducted using Tough's methodology (Brookfield 1983). This study has addressed the issue of quality of learning by relating learning to health behaviors. Hypothesis one of this study specifically examined this issue and it was found that prenatal self-initiated learning was a predictor of ideal weight gain, whereas other-initiated learning was a predictor of reduced alcohol consumption.

In summary, ideal prenatal weight gain was found to be correlated with self-initiated learning and health beliefs. Although only a small portion of the variance of prenatal weight gain was accounted for by self-initiated learning and health beliefs, these results are still noteworthy, considering the multifaceted nature of all potential influencing variables on prenatal weight gain. Reduction in alcohol consumption was found to be correlated with other-initiated learning. A low degree of perceived smoking susceptibility was found to be predictive of reduction in cigarette intake, however further study of this relationship would seem warranted. Fostering a prenatal learning environment which stimulates self-initiated learning; supporting women during their prenatal learning; and, identifying women's perceived susceptibility to their prenatal health behaviors may be starting points for facilitating behavior change during pregnancy.

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MENTORING AND ACHIEVEMENT ACHIEVEMENT AS PREDICTORS OF CAREER SUCCESS

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Abstract: The purpose of this ex post facto, multi-variate study was to investigate the extent to which the career success of adults could be predicted by mentoring and achievement motivation.

The problem of interest in this study was how to help adults develop their skills in the work environment. More specifically, this study investigated the extent to which career success could be predicted by mentoring and achievement motivation.

One option for people development that is growing rapidly in popularity is mentoring. The idea of sponsoring or mentoring is not new, being related to the early concept of apprenticeship. However, mentoring, as it is viewed today, is not so much a matter of formal roles, but rather relationships. For example, Levinson (1978) says that while the mentoring relationship is often situated in a work setting, it can also evolve informally with a mentor being a friend, neighbor, or relative. Mentoring, according to Levinson, is defined not in terms of formal roles, but in terms of the character of the relationship.

Sheehy (1976), author of *Passages*, based her research on intensive interviews with 115 subjects. She views the mentor as a form of non-parental role model. She agrees with Levinson that having a good mentoring relationship is critical to adult development, but feels that little mentoring is actually taking place.

The emphasis that Levinson and Sheehy place on the importance of mentoring in adult development is supported by a more extensive, longitudinal study by Vaillant (1977). The Grant Study of adult development was started in 1933 and tracks the development of 95 male Harvard graduates. Men judged to be "best outcomers" from the study had proven themselves capable of sustained relationships with loving people and, indeed, the evidence from the Grant Study "confirms the adult life patterns outlined by Erik Erikson" (Vaillant, 1977, p. 201). As young adults, the men had sought intimacy with mostly people their own ages but had older mentors. Then at around age 40 they achieved generativity, a rich stage of human existence, and became mentors of younger people. The "worst outcomers" in the study generally did not have mentors and did not become mentors themselves. Vaillant states that:

The Worst Outcomers were less clearly willing to assume responsibility for other adults. Apparently, they were able to give less to their children; for their offspring could neither achieve their father's level of academic success nor adjust to the world--socially and emotionally--as easily as the offspring of the Best Outcomers (Vaillant, 1977, p. 350).

Vaillant's conclusions raise the questions of whether the lack of mentoring can establish a vicious cycle. Perhaps the intensive nurturing hypothesized in the best mentoring relationships could rescue the children of "worst outcomers" from perpetuating the cycle.

The fact that mentoring works in the workplace should come as no surprise. In 1966 Berlew and Hall compellingly demonstrated in their American Telephone and Telegraph studies that it is an adult's early years in an organization, when he or she can be

strongly influenced by upper management's expectations, that are critical in determining future performance and career success. Since the publication of their research, at least four more correlational studies (Bray, Campbell, & Grant, 1974; Buchanan, 1974; Kaufman, 1974; Orphen, 1974), and two experimental studies (Campbell & Ilgen, 1976; Porter, Van Maanen, Yeager & Crampton, 1975), have replicated the findings. Pascale's (1984) study further explores this socialization concept and demonstrates that socialization assists an adult as a new organization member to learn to take ownership of his own development and recognize how he can contribute to the larger corporation. These studies indicate the importance of focusing intensive and effective attention on adults during the first formative years of their careers.

Schmidt's (1961) foundational study on career success for hotel managers also has helped establish the fact that sponsorship (mentoring) is one of the factors that lead to career success. His study reported that unsponsored employees required an average of 14.5 years to reach their first management positions in contrast to 8.6 years for their sponsored counterparts. A recent study by Rutherford and Wiegenstein (1985) specifically confirmed the results from the Schmidt study. They feel their research on mentoring strongly suggests that it is an effective and positive influence on managerial careers. Dalton, Thompson, and Price (1977) have stated that in an ideal situation a new employee will:

Work closely with the mentor learning from observation and from trial and correction the approaches, the organizational savvy, and the judgment no one has yet been able to incorporate into textbooks. He follows instructions and carries out detailed and sometimes boring work in exchange for the things he learns and the sponsorship of his mentor. (p. 24)

It appears from the sources quoted above that mentoring is a developmental tool worth investigating. What a person learns from a mentoring relationship appears to be critical to his or her future career success. Another skill that is also learned from mentoring according to Dalton, Thompson, and Price (1977) is the ability to manage the relationship of being a subordinate.

Just as Levinson, Sheehy, and Vaillant brought mentoring into perspective as a tool of adult development, so too did McClelland (1953, 1961) challenge Americans with his statements about achievement motivation. Research had been conducted in this area since the work of Lewin in the 1940s, but it was McClelland and his associates who claimed that the high productivity of American workers and managers in the 1950s and '60s was due only in part to natural resources, levels of investment, and financial incentives. They felt that too much emphasis was placed on these economic factors. McClelland believed instead that the key factor was cultural conditioning influencing workers and managers to strive for higher material rewards, grasp opportunities, and work toward long-term goals.

To reach these conclusions, McClelland (1961) studied the economic growth of nations extensively. To do this he conducted content analyses on myths, folk tales and children's stories of several nations from different time periods in history. Other researchers studied literary documents (Berlew, 1961) and popular drama and ballads (Bradburn & Berlew, 1961). All of these items were collected and then scored "blindly" for each culture's "achievement" content. What McClelland and the other researchers reported finding was a relationship between the level of achievement motivation and the rise and fall of nations. The researchers have stated they can anticipate a decline or peak in society by about 50 years in advance using this content analysis technique. It is interesting to note that this approach indicates that the United States reached its peak of achievement motivation themes in literature about 1890 and peaked in its activity 50 years later, around World War II.

McClelland and other researchers have claimed that the ultimate cause for a drop in economic fortunes within nations is that they no longer produce sufficient numbers of energetic entrepreneurs motivated by the need to achieve. McClelland feels that entrepreneurial leadership is a product of achievement motivation. He believes that countries should strengthen the achievement need, and thus entrepreneurship, through education programs and changing the environment. McClelland (1965) first put his theory to work in the United States with executives, and then when this was successful, with adults in Hyderabad, India. His longitudinal study on eleven matched pairs of American managers clearly indicated that achievement motivation training led to more rapid promotion. In India, McClelland matched cities on a number of factors including size, literacy, industrial base, and rate of development. McClelland reported that achievement motivation training produced a dramatic effect in the entrepreneurial activity of both the individuals and cities involved. His results are an indication that entrepreneurial "achievement motivated" behavior, such as goal setting, calculated risk taking, and seeking responsibility, can be nurtured in adults as a result of continuing education. It is McClelland's (1965) contention that once achievement motivation behavior has been learned, it predisposes a person to seek out an entrepreneurial position in which he or she can attain more of the achievement satisfactions related to entrepreneurial activity.

Building such a spirit of achievement-motivated entrepreneurship within an organization is critical for its survival. Developing new ideas and new products are the key to survival in today's changing economy. For example, one researcher comments that:

Government for the first time is taking note that new business formation is not just an academic idea but, in fact, the major proven and sustaining source of new jobs . . . technology, which has traditionally been converted by entrepreneurs into things people buy, is increasingly thought to be the United States' number one economic weapon in a tough competitive world. (Brandt, 1982, p. xi, Introduction)

George Quist of Hambrecht and Quist Incorporated, one of the most respected venture capital firms, is quoted in Brandt (1982) as saying that the first thing he looks for in a potential entrepreneur is evidence of drive and achievement orientation. Raynor (1969, 1974, 1982) links achievement motivation even closer to the success of the organization and individual's career through his study of the relationship between achievement motivation and career success. According to Raynor, this linkage is very powerful during the early part of a person's career. It would seem then that if corporations could educate adults to enhance their achievement motivation they could ensure a higher rate of success for new managers with a resulting benefit to both the company and employees.

Achievement motivation thus can be seen to be of importance to both the growth of nations and to corporations and individuals. It can also be developed in adults at any age as demonstrated by McClelland (1965), Burris (1958), Kolb (1963), Aranoff and Litwin (1971), and Durand (1975).

This study has researched the effects of both achievement motivation and mentoring on career success because it is believed that these two variables will provide a more powerful prediction of career success. Achievement motivation behavior, such as seeking responsibility, taking calculated risks, seeking concrete feedback, goal setting, etc., would appear to be the type of behaviors a mentor would want to teach, or when exhibited by a person would lead to his or her being selected for a mentor's attention. A goal oriented, highly motivated, upwardly mobile individual who exhibits a high

degree of personal responsibility and is willing to accept feedback, would be the type of individual who would probably have several mentors willing to assist in his climb to success.

Methodology

The purpose of this study was to identify specific factors which lead to individual career success and thus corporate success. Specifically, this study investigated the extent to which mentoring and achievement motivation could predict the individual career success of corporate managers. The study was designed to collect data on the manager's level of achieving tendency, the extent the manager received mentoring, and the amount of mentoring the managers have in turn given to others. Educational level, seniority, age, and career expectations were included as secondary predictor variables.

The criterion variable of career success was measured by career wage level, rate of position change, rate of wage growth, career position level attained, range of career success, and speed of career success. These six components were then combined to form the final variable of overall career success. To test the hypotheses set forth in this study a large service industry corporation was selected. An ex post facto study was conducted using a systematic sample of 300 managers out of a population of 716. An extensive 158-item instrument was distributed to the subjects, and 258, or 86% of the sample, responded. This instrument contained two mentoring scales (Mentoring Given and Mentoring Received) and the Mehrabian Measure of Achieving Tendency Questionnaire (A.T.Q.). Data concerning expectations, starting position and wage, and various demographic data were also collected by this instrument. Data concerning the criterion variables of present salary and position were provided by the participating organization.

The two mentoring scales were designed with the assistance of a panel of ten experts. Each was a 25 item, Likert type scale. The subjects responses to these items were then submitted to an item-total correlation analysis to identify potentially problematic items. Out of the original 50 items approved by the expert panel, 49 were found to have factor loadings higher than .4 and were included in the final instrument.

To confirm the construct validity of the mentoring scales, a factor analysis was conducted using a principle axis procedure for initial factor extraction. The Kaiser (1974) criterion of an eigenvalue of 1.0 or larger was used for factor inclusion. A varimax orthogonal rotation procedure was used for the estimation of final factor loadings. The results of the factor analyses indicated that two factors could be extracted for mentoring received and three factors for mentoring given.

The final data were analyzed using the multiple regression analysis, stepwise regression procedure. The end result was that thirteen predictor variables were employed to determine their predictive ability for career success. These thirteen were achievement motivation, number of mentors, number of proteges, two mentoring received factors (organizational guidance received and encouragement/promotion received) and three mentoring given to other factors (organizational guidance given, career counseling given, encouragement/promotion given), seniority, age, educational level, wage increase preferred over the next five years, and wage increase expected over the next five years.

This study went beyond much of the research reported in the literature by using an ex post facto design, having multiple hypotheses, having a response rate to questionnaires of over 80%, controlling known extraneous variables by including them in the predictor variables, using a factor analysis procedure to extract specific mentoring factors, using

multiple criteria to measure career success, and looking at both "steady-track" and "fast-track" career success.

Findings

The primary outcome of this research was the affirmation that mentoring was a significant predictor of career success. Mentoring was analyzed in two ways, both as mentoring received from others and mentoring given to proteges. All seven career success variables involved at least one form of mentoring as a significant predictor. Mentoring given was a significant predictor for six of the career success variables. Mentoring received was a significant predictor for five of the variables. For four of the career success variables, both mentoring received and given were significant. When both types of mentoring were predictors for a single variable, mentoring received always emerged as the most significant predictor. The number of mentors or proteges a manager experienced was not found to be a significant predictor. It was determined that it was the quality or intensiveness of the relationships, not the quantity or extensiveness that made mentoring a significant predictor of career success. Mentoring was found to be a significant predictor both for fast-track success people as well as for the less spectacular, steady-track form of career success.

Achievement motivation was a significant predictor for only one of the seven career success variables, rate of annual wage change. The sample used for this research, however, had a mean for achievement motivation almost one standard deviation above the national norm which could explain why it emerges only once as a significant predictor. Educational level, age, seniority, and career expectations were also significant predictors, with education level and career expectations being the most significant.

Conclusions

The findings of this study would be of interest to those organizations concerned with how their adult population might best be developed. The implications of this study are extensive, as at this time there is very little investment made in developing mentoring and achievement motivation as career-enhancing skills in adults. This research has indicated which areas should be invested in to receive the maximum impact.

Individuals interested in their career development would also find this study interesting as it explores the roles of mentoring and achievement motivation, and ways these two factors can be built into successful career paths. It also describes other significant predictors of career success that might be useful to a new or ongoing career.

In adult education this study emphasizes the need to develop courses in how to get mentored and how to develop achievement motivation for clients who are interested in careers where advancement is possible.

Implications for Practice in the Field of Adult Education and H.R.D.

This study has shown that mentoring given and received is a predictor of career success, along with educational level, wage increase expectations, and to a much lesser degree, achievement motivation. Depending on the individual and his career pace and stage, different factors of mentoring were predictive of his success. Specific implications are as follows:

1. This study would suggest that both mentors and proteges definitely benefit from mentoring. Because of this sample's relatively young age (36) and the

fact that much of the literature indicates that younger people (under 35) are more apt to be mentored, this suggests that corporations should definitely encourage mentoring for their new and early career people.

2. A second implication of this study is that corporate training programs should include courses on how to give mentoring (skills of encouraging, praising, skillfully promoting the strengths of others, and career counseling), as well as programs on how to get mentored. These might be designed around the skills McClelland indicated are vital to achievement motivation, as well as items identified in the extensive research already reviewed.
3. A third implication of this study would be that corporations should look at the educational levels demanded for success at each career stage, and find ways to provide this important success predictor to as many of their managers as possible. Tuition reimbursement and in-house adult education programs should increase the probability of career success.
4. A fourth implication of this study concerns achievement motivation. Even though it only was a significant predictor for rate of wage change, the high incidence of achieving tendency in this sample indicates that it could play an important role in career success. Achievement motivation training does develop achieving tendency and should become a part of management development programs and adult education programs concerned with enhancing adult career success.

Recommendations for Further Research

In view of the conclusions reached by this study, several suggestions for further research are appropriate. Some of the most important are:

1. This type of study needs to be expanded to adults in settings other than corporations.
2. A replication of this study at other organizations with a sample closer to the mean in achieving tendency is recommended.
3. Additional study needs to be done as to the interaction effect of mentoring and achievement motivation. The two together should be a powerful influence on career success of adults.
4. More research is needed to investigate why the quantity of mentors and proteges a manager has is not a significant predictor of success to at least some degree.
5. Characteristics of the successful mentor need to be studied more extensively. What is it that he or she does that makes him or her effective?
6. Characteristics of the successful protege need to be investigated thoroughly. What gets a protege mentored? Does achievement oriented behavior attract mentors, or keep them at a distance?

It is hoped that these suggestions will encourage additional research into the effects of mentoring, achievement motivation, and career expectations on career success. This study indicates that to varying degrees each of these variables plays a role in predicting career success. If adults in the workplace are to be challenged to develop into all they can be, then the practice and use of these predictors of career success is a mandate.

INCIDENTAL LEARNING AT WORK:
A TYPOLOGY OF ADULT LEARNING IN THE COURSE
OF ORDINARY AND EXTRAORDINARY ACTIVITIES

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Abstract

In jobs which require a substantial portion of non-routine activities, the learning of specific skills, knowledge, and attitudes often occurs during the course of task accomplishment, rather than in a formal training context. This incidental learning occurs through various forms of individual actions and interpersonal interactions in the service of task accomplishment, and may be correct or incorrect. A model based on learning practices in organizations is presented that explores these mechanisms of learning.

Objectives

This paper reports a model developed as part of a study by Dr. Karen Watkins and Albert Wiswell conducted to explore the nature of incidental learning among adult educators and related personnel at three large organizations (a hospital, a state agency, and a high-tech manufacturing firm) with the intent of identifying barriers that interfere with this vital process. Written instrumentation, individual interviews, and group feedback sessions were used to identify individual and organizational characteristics that affect the extent and quality of this learning. The following questions were posed:

1. What is the nature and extent of incidental learning?
2. What specific factors inhibit it and facilitate it?
3. What processes may function to enhance incidental learning?

Background

Estimates of the financial investment in learning activities in the United States in 1981 reported totals for five different categories which comprise the arenas for learning in this country (ASTD, 1986). The totals for those areas are as follows:

Government training: \$5 billion
Employee formal training: \$30 billion
Post secondary education: \$94 billion
Elementary and secondary: \$144 billion
Employee informal training: \$180 billion

These figures are startling in their own right, showing what a massive enterprise learning has become in our society. Moreover, the largest category, in terms of financial expenditures, is that of employee informal training, and many experts agree that the least is known about this area (Houle, 1980). Informal learning at work takes several forms although it is typically considered in the realm of on-the-job-training. OJT is usually considered a process that an employee engages in when new to a particular position or when given new job responsibilities. That process is one of learning the routine characteristics of the job. The primary job activity is task accomplishment, although learning is acknowledged to be an important component and by-product of the activity.

There are areas distinct from acquiring routine skills in novel situations that also involve learning while performing job functions. One area, which would include new as well as seasoned employees, is learning about the climatic, cultural, and political nature of the organization. These characteristics vary between organizations and change within organizations over time to a certain extent. Another area is concerned with jobs that by nature have a substantial non-routine component with respect to tasks required. In these jobs, there is the constant need for learning in the context of task accomplishment and even task definition. This may involve learning in the form of information access, individual or group problem solving, and adapting to changing circumstances. This learning may require specific individual learning skills or interpersonal skills in order to be performed effectively.

A very important form of learning can occur as a natural adjunct of work activities by those who can learn to reflect on their experiences (Schon, 1983). This use of experience as a learning activity does not always occur; as pointed out by Earl (1984), learning and experience are not the same thing. Learning is more often related to a change in a person's experiences. This is similar to the conceptualization by many cognitive theorists of an information processing perspective, who argue that learning is a process of changing one's mental model of the environment and that does not occur unless an experience causes an awareness of an incorrect aspect of the model. That is, we learn from our mistakes, or rather, the possibility exists that we may learn from our mistakes.

For the purposes of this study, the focus will be made on these types of learning and not on those informal learning activities that could be considered in the traditional framework of OJT. For these other types of learning, the term incidental learning will be used to distinguish this very crucial form of informal learning. Incidental learning is defined as: an acquisition of new skill, knowledge, or attitude resulting from an action or transaction, the intention of which is task accomplishment.

Incidental learning, then, includes such things as learning from mistakes, learning by doing, learning through networking, learning from a series of interpersonal experiments (e.g. "I test my parameters with a new boss by asking for things to see what gets shot down."). This learning often exists on an undiscussable, unanalyzed, and often erroneous level (Marsick and Watkins, 1986). This learning may be instrumental to the task or extraneous. It may be intentional or unintentional. Moreover, the learning may be correct and useful or incorrect and counterproductive. This study focuses on the mechanism of incidental learning, significant because of its elusive nature and probable importance to learning on the organizational level. In order to more clearly delimit the concept of incidental learning, a compendium is offered of some of the characteristics, activities, and related features of this mode of learning. These include the particular actions or transactions, the types of learning content, and the facilitating and inhibiting mediators present in the organization. These features are not necessarily orthogonal, nor are they mutually exclusive for describing a particular incident; rather, they describe a relevant facet of the incident.

Actions: (individual activity)

Reading
Writing
Observing
Modeling
Making a mistake
Reflecting on experience

Content areas:

Specific task-related knowledge
Nature of the job
Culture of the organization
Task related technology

Mediators: (may inhibit or facilitate)

Organizational structure
Policies and procedures
Information accessing systems
Permission to experiment
Logistical priorities
Professional competencies
Political infrastructure
Reactions to mistakes
Ability to reflect on experience
Common vision and goals

Transactions (interpersonal activity)

Questioning
Modeling
Giving information
Making a mistake
Experimenting

Interpersonal skills
Feedback and evaluation
Empathic communication
Group participation

Intergroup network
Group responsibility
Mutual trust
Job security
Resources
External factors
Role models
Personalities
Cultural attitudes

METHODOLOGY

Data for the Watkins and Wiswell study was collected at three sites, a major hospital system, a large state agency, and a Fortune 500 high-tech manufacturing firm. Over 60 individuals have participated from these organizations. These persons were all involved in some respect with the educational activities of the organization. Particular job categories included curriculum coordinators, training specialists, OD specialists, managers, and related staff.

The concept of incidental learning was examined by exploring individual learning practices, including both the formal and informal activities of problem-solving, information access, and information dissemination engaged in the context and in the service of the individual's particular role in the organization. The individuals studied have roles which often demand a high level of learning in the organizational context, due to the frequent non-routine nature of their jobs. Written instrumentation and structured interviews were used to examine these issues. First, a descriptive analysis of learning practices was conducted. The primary purpose of this was to assess the amount and types of learning that occurs by individuals in the organizational context. Then a model was formulated based on a typology of incidental learning that describes the learning process.

The Learning Practices Audit, developed by Wiswell and Watkins, is a paper and pencil instrument designed to assess job-related employee characteristics, formal work-related learning experiences, and informal learning practices and propensities. Themes around the possible barriers concerning learning are assessed using a three part exercise fashioned

loosely from the case study methodology used by Argyris *et al* (1985) for identifying theories in use. In this exercise, respondents are presented with a written record of a dialogue between two persons in a work environment. The respondents are asked to imagine themselves as the person indicated in the dialogue and record what their unexpressed thoughts might be if they were actually having the conversation. These responses are used to help identify themes of interaction that may characterize the learning climate of the organization. The interview schedule, developed by Watkins and Wiswell, consists of questions in five areas related to problem solving, learning barriers, undiscussable learning related issues, and individuals within the organization who are respected for their learning activities.

Qualitative Results

Theme analysis of interviews as well as material in the written instrument has been a rich store of information providing the flavor of the learning environment. These themes often have the characteristic of being a cogent and reasonable characteristic of the organization, but may be paradoxically dysfunctional in the particular setting. The learning to be focused on involves the various forms of incidental learning to be organized according to a typology describing the nature of the activity, the content area, and relevant mediators. Feedback sessions held with participants served to allow modification and elaboration based on additional confirming or disconfirming data.

One of the most salient themes emerging from the data was that individuals are often aware that barriers exist to more effective learning, but they operate under the hypothesis that the barriers are unalterable. This hypothesis is seldom tested, and when tested, is often tested ineffectively, precluding the possibility that it is not true. For example, when presented with an imaginary dialogue in which they were being told by a coworker that some organizational changes were in the works, many respondents indicated unexpressed thoughts on the order of "Here we go again; changes will be imposed on us and we won't have any say." With a working hypothesis such as this, presumably formulated on the basis of past experience, it is unlikely that any attempt will be made to test its validity, and resulting behavior based on this hypothesis will strengthen the condition that the situation is intractable.

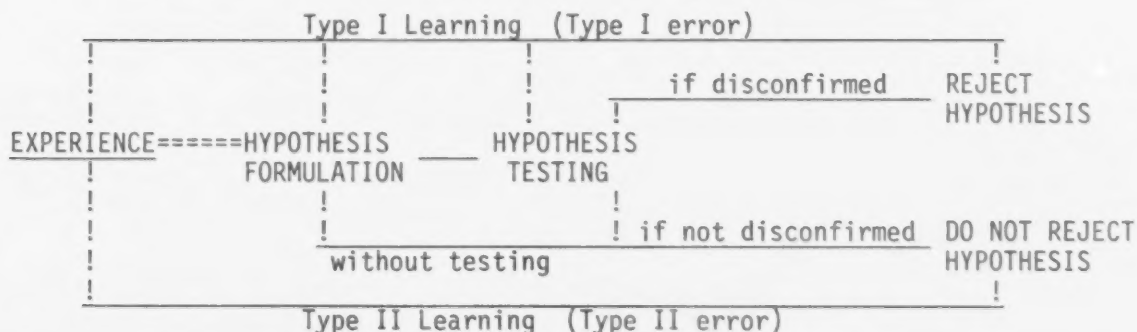
Another example of operating on an untested hypothesis came from a new training specialist who was assigned to work with an older, more experienced trainer in developing a new curriculum. The new trainer assumed this assignment was made so that she could learn skills from the veteran trainer. Therefore, several times when she disagreed with the the material development, she deferred from expressing her reservations. When the training was delivered, there were so many flaws in both the content and presentation that the curriculum had to be redone. It was only at this point that the new trainer discovered that one of the reasons for the pairing was to give the veteran trainer exposure to some fresh techniques and up-to-date content. Untested hypotheses by both the trainer and the supervisor making the assignment directly led to this dysfunctional set of events, although it would be cavalier to suggest that these hypotheses could have been adequately tested without acquiring some new skills for doing so.

Discussion

Argyris has developed a model which offers a set of conditions without which at least one kind of learning is unlikely to occur. This formulation of learning necessitates (and specifies) a particular style of interpersonal interaction as a requisite condition in order to break through defensive routines (Argyris *et al.*, 1985). Part of this analysis of interaction as developed by Argyris involves focusing attention on the inferential quality of most verbal interactions. People have a natural tendency to infer additional meaning from actual statements made in dialogues (referred to as relatively directly observable data). These inferences range from culturally-normed meanings to organizationally and individually relevant inferences that may or may not reflect the intentions of the speaker. These high level inferences do reflect, though, the theories-in-use of the actors which can serve to explain dysfunctional behavior and interactions. This "ladder of inference" often results in faulty and misintended communication. When the stakes are high, mandating effective communication, untested incorrect inferences can greatly contribute to dysfunctional interactions. This may result in learning incorrectly, which leads to faulty behavior and decision making.

Considerable attention has been given to the acquisition of interpersonal skills that facilitate effective interactions in the workplace. Openness in giving and receiving feedback, mutual trust, and attitudes of free expression and experimentation all contribute to create a climate of inquiry and innovation. Productivity by work groups in the context of the workplace necessitates an environment that allows learning in the broadest sense (Mink, *et al.*, 1979), and as illustrated, the probability of incorrect learning is high when based on untested or poorly tested hypotheses. Figure 1 is offered as a conceptual model of how this incidental learning can take place.

Figure 1: A Model of Experience-based Incidental Learning



Experience forms the base from which learning may occur. From a variety of individual actions, interpersonal transactions, and observations, hypotheses are formulated as tentative explanatory propositions in order to understand the experience. These hypotheses may be accepted without testing their validity, in which case they become strengthened as part of the mental model underlying further experience. As such, because they are not tested, they may be either correct or incorrect and it is not possible to know which without further experience.

Alternatively, these hypotheses may be tested by various means: reflection, inquiry, comparison with other hypotheses, or gathering data from additional experience. The testing process is intended to disconfirm the hypothesis in question and, if it does, the hypothesis may be rejected. Once rejected, the individual may do one of three things. If the hypothesis is robust, i.e., if it is especially compelling (or threatening to reject), it may be subjected to additional testing. If the experience leading to the hypothesis is robust, i.e., relevant or crucial to major issues, there may be additional hypotheses formulated to explain it, and those new hypotheses tested. Lastly, if the rejection of the hypothesis is accepted, the mental model on which further experiences are based is changed. This learning is labeled Type I learning due to the nature of the possible error, incorrectly rejecting a true hypothesis. The testing of the hypothesis may instead result in not being disconfirmed, i.e., the hypothesis withstands the test. Thus, it is not rejected and continues to be the base for additional experience. This learning is labeled Type II learning, due to the nature of its possible error, not rejecting a false hypothesis.

To decrease the likelihood of error (incorrect learning), more powerful means are needed for testing hypotheses. Skill development in the manner discussed by Argyris *et al.* is directed at increasing the power of this testing through public inquiry into the inferences which lead to various attributions, advocacies, and evaluations that follow from individuals theories of action, from which hypotheses about experience are made. Acquired skill in reflecting in action as discussed by Schon may also increase the quality of perceptions about experience.

Adult education has traditionally been concerned with learning in the context of acquiring predetermined knowledge, skills, and attitudes. This has certainly been the case with workplace learning. This study suggests that much learning may occur in a different manner, and that individuals may unknowingly learn incorrectly, with adverse consequences. As a content area for formal training, skills in formulating and testing experience-based hypotheses can be taught. More powerful skills lead to lesser chance of incorrect learning, which can enhance organizational development as well as learning by adults as individuals.

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AN EXAMINATION OF COGNITIVE RESTRUCTURING
IN AN ADULT CONTINUING EDUCATION WORKSHOP

JAY D. YOUNG

ABSTRACT

This study examined the concept of cognitive change in adults by determining if a specific educational instructional approach -- Contextual Learning -- could cause cognitive restructuring in adults participating in a Contextual Learning Workshop. The transformation of participants' perspectives from a present to a future time orientation, and from a local to a global world view as determined by Future World Perspective Values Scale scores were used as indicators of cognitive restructuring. A non-equivalent control group design was utilized in which treatment and control groups comprised of elementary and secondary teachers were administered the scale. Results indicated that contextual learning did have a significant impact at the .0001 level on the world perspectives of adults participating in the study.

THE PROBLEM

The need for more research on adult learning theory has changed very little since Mezirow (1971) stressed that additional research concerning a systematic approach to adult learning and its application to practice should be given a major priority in the field. The primary area of investigation of this study, cognitive restructuring, is one approach in attempting to understand and explain adult learning.

Cognitive Restructuring essentially is learning which transforms existing knowledge to bring about a new view or perspective. All new learning is not just additive to what is already known, but transforms existing knowledge to bring about a new perspective (Mezirow, 1978).

Cognitive restructuring, as a major approach in attempting to understand learning appears worthy of additional research and investigation in developing a theory of adult learning. There have been few studies that have attempted to test for cognitive restructuring in adult education. Additional research needs to be done which will tell us more about the phenomenon. Investigation of the concept of cognitive restructuring could begin to bridge the gap between theory and practice in adult learning as well as operationalize the concept with adults.

The problem of this study was whether an adult's cognitive structure could be restructured through a systematic learning experience. The study purpose was to determine if a Contextual Learning instructional approach could transform the perspectives of adults from (a) to present to a future time orientation, and (b) from a local to a global world perspective. This was examined by exploring the effect of a specific adult education instructional approach (Contextual Learning) upon the world perspectives of participants in Contextual Learning workshops.

Previous Research

A review of the literature on cognitive restructuring reveals that relatively little has been done to study the subject with adults in any of the various ways in which it has been conceptualized. The few data based studies that have been done range from Hunter's (1980) exploratory study of perspective transformation, to Even's (1981) research into brain lateralization in the adult. Even less has been done to systematically test for cognitive restructuring in the adult learner. Long, McCrary, and Ackerman (1979) reviewed research on Piaget's stages of cognitive functioning with adults.

METHODOLOGY AND PROCEDURES

Edward Clark's Contextual Learning approach is designed to restructure the view of adults by bringing about a future global world perspective, as well as to increase the information-processing capability of the learner. Clark (1979) indicates that Contextual Learning is an education strategy that both reflects and describes the major paradigm shifts that are occurring in American society. These changes on perspective include: (1) from the past as context to the future as context and (2) from a local to a global world perspective.

Design

The design of this research study was quasi-experimental. A non-equivalent control group design utilizing two groups -- a control group (N=33) and a treatment group (N=42) was employed.

Sample

Subjects assigned to the treatment group were elementary and secondary school teachers in the DuPage County Illinois Public School System who chose to participate in a weekend Contextual Learning workshop. These workshops are offered throughout the course of the year as a component of the continuing education program for public school teachers in DuPage County. The study sample was taken from one workshop where the enrollment consisted of 42 participants. Subjects assigned to the control group were elementary and secondary school teachers from the same school system who were enrolled in continuing education general studies courses at the National College of Education in Lombard, Illinois. This group was then divided by classes for testing procedures.

Primary Hypothesis

H01: There will be no difference between post-test Future World Perspective Values Scale scores obtained from adults participating in Contextual Learning workshops and those not participating.

Secondary Hypotheses

H02 through H05: There will be no relationship between post-test Future World Perspective Values Scale scores obtained from adults participating in the study and their gender, age, subject taught, and number of years in teaching.

Procedures

The treatment, in the form of a Contextual Learning Workshop, was comprised of five sessions over a two-day weekend and totaled 14 contact hours. Session One (two hours) provided a general introduction to the workshop, the concept of contextual learning, and learning in a global information society.

Session Two (three hours) presented an overview of the changing contexts in a global information society. Session Three (three hours) continued to provide an overview of the changing contexts in a global information society. It focused essentially on the Information Context and the ability to select appropriate information. The goal of Session Four (three hours) was to provide an introduction to the utilization of various contexts in curriculum design. Session Five (three hours) stressed the specific application of the curriculum design concepts discussed in the fourth session to the design of each participant's specific educational curriculum.

The treatment group was pretested immediately prior to participation in the workshop and posttested immediately following the workshop. Two months later, a second posttest was administered to the treatment group by mail.

The control group was divided into two groups by the classes in which they were enrolled. One class, designated as control group #1 (N=15), was pretested and post-tested but with no treatment. The second class, designated as control group #2 (N=18), was post-tested only, again with no treatment. This design was selected because it addresses some of the major threats to the internal validity of the study, such as participant maturation, reactive and interactive effects of testing, history, and bias in differential selection of respondents in comparison groups (Campbell & Stanley, 1963).

Future World Perspective Values Scale

The instrument used to measure world view was David Silvernail's Future World Perspective Values Scale, (FWPVS). This Scale was designed to test the two dependent variables in this study, the perspectives of adults as they related to (a) time orientation (present vs. future), and (b) world perspective (local vs. global). This Likert type instrument assesses an individual's value perspective as it relates to the entire global community. Four value constructs are utilized within which an individual determines his or her view of the world. These areas are: economic growth, adaptive technology, international cooperation, and world economic justice.

A person responds to each of the 28 items on the scale by indicating their feelings about each item, ranging from strongly agree to strongly disagree. Point values range from 6 (strongly agree) to 1 (strongly disagree).

For scoring purposes items number 2, 3, 7, 9, 10, 12, 14, 16, 17, 18, 20, 26, and 28 on the scale are reversed; that is, a "strongly agree" response to any of these items is scored "1" as opposed to "6". The scores could have ranged from 168 (strongly agree) to 28 (strongly disagree).

DATA ANALYSIS

For the primary hypothesis, which postulated that there would be no difference in post-test scale scores obtained from adults participating in the Contextual Learning Workshop and those not participating, an analysis of co-variance was calculated for differences in post-test scores of the FWPVS between participants in the workshop and those not in the workshop.

The results of the analysis of co-variance indicate that there was a significant difference between the groups ($F = 21.09$, $df = 1/54$, $p < .0001$) at the .01 level. Therefore, the primary hypothesis that there would be no difference between posttest FWPVS scores obtained from adults participating in Contextual Learning Workshops and those not participating was rejected.

Differences in posttest score means between control groups were analyzed by the use of t-tests to assess pretest sensitivity. Again, the alpha level for determining significance was set at .01. Control group #1 received both pretests and posttests of the scale, while control group #2 received the test once. The calculated t value was .3934, which was not significant at the .01 level indicating that no significant pretest sensitivity was observed in this case.

In addition, in order to determine lasting effect of the treatment, the difference between means on the posttest and the post-posttest scores for the 19 subjects of the experimental group who completed the post-posttest was analyzed by the use of correlated t-tests. The alpha level for determining significance was set at .01. A significant difference was not found between the posttest and post-posttest scores of these 19 subjects at the indicated level. Although not indicating significance, the means show that the treatment effect was still in evidence two months after its application.

The secondary hypotheses (second through fifth) which examined the relationship of gender, age, subject taught, and number of years in teaching to post-test scores on the FWPVS, were analyzed using Pearson product r correlations.

Zero order correlations for these variables with post-test FWPVS scores of participants indicated that none of the demographic variables was significantly related to the post-test scores on the FWPVS.

CONCLUSIONS

Results of the collection and statistical analysis of data as herein described rejected the primary hypothesis that there would be no difference between posttest subject scores on the FWPVS obtained from those participating in Contextual Learning workshops and those not participating. A significant difference between the 2 groups at the .0001 level was found. There was an 11.02 point increase in posttest FWPVS scores obtained from the treatment group, as compared to a .20 point decrease in post-test FWPVS scores for the control group. In addition, the demographic variables of age, gender, subject taught, and number of years in teaching did not significantly relate to scores on the scale. This indicated support of the secondary hypotheses postulating

that there is no relationship between these variables and participants' scale scores. Therefore, hypotheses number 2 through 5 were accepted. Also, t-test calculations indicated no observed significant pretest sensitivity. Finally, the treatment group subjects' changes in world view, as measured by the FWPVS, were still in evidence 2 months after participation in the Contextual Learning Workshop.

Based upon the statistical results, it was concluded that the specific adult education instructional strategy of Contextual Learning did have a significant impact upon the world perspectives of adults who participated in the Contextual Learning workshop of this study. More specifically, the Contextual Learning instructional strategy significantly changed the world perspectives of adults participating in the Contextual Learning workshop of this study from (a) a present to a future time orientation, and (b) from a local to a global world perspective. These results suggest that cognitive restructuring did occur in adults who participated in the Contextual Learning workshop of this study.

The results of this study provide several theoretical and practical implications for the field of adult education. The major contribution has been to provide evidence that cognitive restructuring does occur in adults, which supports the concept that adult learning is, at least in part, a function of that restructuring. This gives additional credibility to adult learning theorists such as Freire (1970), Mezirow (1978), and Clark (1979), who have proposed that adult learning involves cognitive change. Also there may well be stages of adult cognition beyond that of Piaget's formal operations, and the formal operations stage of cognitive development may not be completed by early adolescence.

This study also suggests that a holistic approach, such as Contextual Learning, to structuring knowledge and developing curricula in adult education would provide an adult cognitive structure more adequate for increasing information processing capability. This has major implications for adult educators for both classroom instructional approaches and curricula design. The study also provides a start in bridging the gap between conceptualizations of cognitive restructuring and testing of the concept with adult learners.

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SYMPOSIUM PAPERS
AND
POSTER PRESENTATIONS

MENTAL ABILITIES MEASUREMENT

AND THE MINORITY ADULT

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Abstract: The over-representation of minorities in special education and remedial classes points to significant problems with the standardization and validity of assessment measures. Intelligence-fair testing is needed to ensure recognition of the intelligences valued by different cultures and ethnic groups and to avoid the injustices inherent in measurement systems appropriate only to limited kinds of intelligence.

Both the underpreparedness of minorities for college work and attempts to attribute this underpreparedness to lack of intelligence present significant obstacles to equal opportunity in education. Before these obstacles become insurmountable barriers, we must arrive at a better understanding of the mental abilities of minority adults. Unfortunately, study is seriously handicapped by the nature of current assessment measures. Two major problems impede understanding: (1) the lack of research using reliable intelligence measures normed for minority adults and (2) the low reliability of current measures for predicting academic success. Identifying and analyzing such problems and developing alternative intelligence measures appropriate to adult minority members are essential if we are to offset reactionary thinking and ensure equal access to higher education.

Historically, aptitude measures have resulted in negative labeling of minorities' intelligence (Samuda, 1975). Intelligence tests are routinely used to classify and place children into various academic programs, and the disproportionate number of minority children placed in EMR classes on the basis of test performance has been recognized for years. One basic problem with these tests is sometimes overlooked, if not ignored, by psychometricians: the ethnic or racial make-up of the test-group used to determine the instrument's reliability. Reliability refers "to the consistency of scores obtained by the same individuals when re-examined with the same test on different occasions, or with different sets of equivalent items, or under other variable examining conditions" (Anastasi, 1968, p. 71). During the standardization process of test development, the reliability coefficient will be computed by correlating the scores of a specific group of test subjects; consequently, the reliability coefficient for a given test is specific to the population from which the sample of participants was taken. This coefficient cannot be applied to populations who were not represented in the standardization sample, meaning that a test normed for white suburban students may not be equally reliable when given to

black urban students or Hispanic rural students. Nonetheless, these standardized tests have been given indiscriminately to members of nonparticipating populations for years, and the results have been compared to those of the participating population. Predictably, findings show that scores for minority group members cluster at the lower end of the normed scale with little difference in ranking among minority groups (Samuda, 1975).

Consistently, then, minority children are assessed by means of tests that do not indicate the value of the reliability coefficient for their group. They only tell how reliable tests are with the sample groups upon whom reliability was first established. As a result, for those groups that differ from the sample group, that is, for minorities, the "actual effectiveness of the test will tend to be lower than the reported reliability coefficient appears to promise" (Fishman et al., 1964, p. 131). High reliability coefficients are only high for the reliability sample and those groups that approximate it. They will tend to be much lower for groups that are more homogenous and have a smaller range of talent than the reference group (Samuda, 1975, pp. 20-21).

To date, there are very few widely used intelligence tests which were normed using minorities during the standardization process. Similarly, reliability computations for minority groups on existing tests are scarce. However, generally administering standard intelligence tests to members of minority groups appears to lower the reliability coefficient for those members (Samuda, 1975), and lowering the reliability of a test also lowers the validity of a test, raising serious doubts about the validity of minority members' intelligence test scores.

High reliability does not guarantee validity, but "low reliability may destroy validity" (Fishman et al, 1964, p. 133). Fundamentally, a test is valid if it measures what it is intended to measure. An "intelligence" test is designed to measure intelligence and to predict scholastic success. Three major types of validity considered in the validation process of any test are content validity, criterion-related validity, and construct validity. All three are problematic in the context of assessing the intelligence of members of minority groups.

Two major assumptions are made in this validation procedure with respect to scholastic aptitude or mental ability: (1) test takers have been exposed to and are familiar with the universe of information from which test items are drawn; (2) the language of the test is the language of the test takers (Samuda, 1975, p. 22).

If exposure to and some familiarity with the content, or "the universe of information" from which test items are developed, are necessary prerequisites to content validity, then many minority group members are at a distinct disadvantage when taking an intelligence test (Taylor, 1971; Klineberg, 1935). Differences in life experiences and viewpoints, exposure to different kinds of knowledge and culture, the scope of the subjects' reading and educational background--all of the characteristics which distinguish one social or ethnic group from another may have a significant impact on test results. If intelligence tests actually tap the degree of exposure to a specific kind of content, then these tests may actually be achievement tests rather than aptitude tests. Furthermore,

the language of the intelligence test is typically not the language of the minority test-taker (Samuda, 1975; Oller, 1978), suggesting another serious impediment to minority performance as well as another detractor from the validity of the test as a measure of the minority test-taker's intelligence.

The second type of validity, criterion-related validity, involves comparing test performance with performance on some criterion which provides a direct measure of the aptitude in question. For example, one's score on a music aptitude test might be compared to performance in a music class or on a musical instrument, or one's score on an intelligence test might be compared to one's success in school. Criterion-related validity, then, means predictive validity on some criterion measure. However, the correlation between IQ performance and scholastic success as measured by grades is in the vicinity of +.50, suggesting that IQ test performance is not an infallible, or even a particularly good, predictor of scholastic success. The assertion that IQ performance is still the single best predictor of scholastic success weakens given the fact that only 25% of the variance in scholastic success is attributable to IQ performance. Obviously other factors seem to play important roles in scholastic success; in fact, research suggests many environmental and attitudinal variables (Block & Dworkin, 1976; Kamin, 1974; Samuda, 1975; Gardner, 1985; Jenks et al., 1972).

Construct validity refers to the "psychological qualities a test measures" (Technical Recommendations for Psychological Tests and Diagnostic Techniques, 1954, p. 14). According to Ebel and Frisbie (1986), the "term construct refers to psychological constructs, each a theoretical conceptualization about an aspect of human behavior that cannot be measured or observed directly" (p. 96). Since the construct at hand is intelligence and since psychometricians cannot agree on a definition of intelligence (for example, Spearman's g factor versus Thurstone's seven primary abilities), the construct of intelligence is difficult to define and validate. Whether intelligence tests show construct validity will depend upon the researchers' assumptions about the nature of intelligence. And whether a test shows construct validity for a particular population may depend upon how closely the researchers' assumptions coincide with those of the group tested.

In terms, then, of reliability, content validity, criterion-related validity, and construct validity, there are serious drawbacks to using current measures to assess the intelligence of minority children. Similar problems handicap the measurement of mental abilities in minority adults.

Although there have been attempts to incorporate minority adults in standardization samples in the development of some tests, by and large these attempts have been few and far between. A good example of such an attempt is the development of the WAIS-R (Wechsler, 1981) where careful consideration was given to sampling in a stratified manner across age, sex, race, geographic region, occupation, education, and urban-rural residence (Goldstein & Hersen, 1984). However, problems persist concerning the standardization of the ACT and SAT--the two measures which many colleges rely upon for admission, classification, and placement of students and which include an intelligence component. As a result, the reliability and validity of the test scores of minority adults are questionable.

Generally, admissions test scores on ACT and SAT tests are not as accurate as predictors of college grades for U. S. Hispanics as they are for white

non-Hispanics--an indication that the tests do not satisfy the requirements of criterion validity for this minority population (Duran, 1983). Overall the tests' predictive validity for minorities' academic success in college ranges from poor to weak (Duran, 1983).

The content validity of the tests is also questionable since the language of the tests--standard American English--may not be the language of the test-takers. In fact, research indicates a high correlation between English-language proficiency and scholastic success in college:

Chicano students who scored high on the verbal subtest of the Scholastic Aptitude Test (SAT) tended to make good grades in college, even after their high school grades were taken into account. Thus, language proficiency seems especially important to the college performance of Chicanos (Astin & Burciaga, 1983, p. 631).

Indeed, proficiency in the English language appears to be a high positive correlate of performance on college entrance exams and scholastic success (Samuda, 1975; Duran, 1983). According to Gardner (1985), academe holds logical and linguistic performance in such high esteem that those who are weak in either area will find it difficult to perform well in college. These and other researchers are saying that it is not a lack of intelligence but deficiencies in specific cultural achievements, like English language proficiency, which correlate highly with poor academic performance. According to Lowman and Spuck (1975), background factors such as SES and English-language proficiency are better predictors of college success than college entrance scores. It appears, therefore, that scholastic success is at least partially a function of cultural achievements which are infrequently attained by minority adults.

Because of these weaknesses in the commonly used measures of intelligence and ability, current understanding of the mental functioning of minority adults is woefully inadequate. Moreover, because the fundamental nature of these measures--the measurement of logical and linguistic performance--is inextricably tied to the values and strengths of the majority culture, there may be little hope of improving our understanding without a radical reassessment of some of our basic assumptions about intelligence.

What is needed is an alternative measure or measures of mental functioning based on an alternative approach to intelligence, a way of conceptualizing intelligence which minimizes superiority-inferiority dichotomies and does not favor any one race, culture, or viewpoint. The alternative concept called for here is "intelligence-fair" testing. Such testing would shift the emphasis away from culture (while respecting it as a correlate of different kinds of intelligence) to different but interactive "intelligences" which potentially exist in all people regardless of culture (Gardner, 1985). Intelligence-fairness presupposes that different intelligences are equal in importance and that the initial testing of these intelligences should involve all participating cultures in the standardization process from a very early age. According to Gardner,

. . . There is persuasive evidence for the existence of several relatively autonomous human intellectual competences, abbreviated hereafter as "human intelligences." . . . The exact nature and breadth of each intellectual "frame" has not so far been satisfactorily established

nor has the precise number of intelligences been fixed. But the conviction that there exist at least some intelligences, that these are relatively independent of one another, and that they can be fashioned and combined in a multiplicity of adaptive ways by individuals and cultures, seems to me to be increasingly difficult to deny (1985, pp. 8-9).

Gardner identifies the following kinds of intelligences: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, interpersonal, and intrapersonal as a beginning point from which to develop modes of assessment and educational training strategies. He also suggests the development of an intellectual profile beginning at an early age which reflects an assessment of intelligences. Intellectual profiles are not new to psychometricians; however, Gardner's profile will have a distinct advantage over its predecessors because representative samples from all participating cultures and peoples will be involved in the standardization process. This cultural representativeness reflected by appropriate instruments means that the profile's validity across a wide range of people from diverse backgrounds is virtually ensured. Furthermore, it circumvents judgments of intelligence based on simplistic single-score interpretations and interpretations from a battery of unrelated scores.

Granted that Gardner's theory of multiple intelligences and this idealistic mode of assessment are still in their infancy, conceptually and from a research perspective, they provide us with an alternative to current theories and assessment measures. Research is needed to substantiate Gardner's claim concerning the "relatively autonomous" existence of these intelligences as well as other core facets of his theory. However, his approach appears to be a refreshing change from current theories and one which seems to promise a more "intelligent" outlook for mental measurement in general and minority-adult mental measurement in particular.

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METHODOLOGICAL ISSUES IN RESEARCH ON
ADULTS: PATHWAYS AND PITFALLS

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Abstract: This paper analyzes a number of problems which plague educational research in general and which have particular relevance to research on adults in particular. It also sets the stage for three accompanying papers.

There is an old story about a man who approached a group of workmen involved in a construction project. Curious about the nature of their project, he asked one of them what he was doing. "Making ten bucks an hour," was the terse reply. Unenlightened, the onlooker approached a second workman with the same question. "Can't you see that I'm laying bricks," was his response. Since that reply also failed to satisfy the onlooker's purpose, he inquired of a third workman what sort of project he was involved in. "I'm building the grandest cathedral this country has ever seen," the worker replied with obvious pride.

Aside from its obvious potential as a basis for sermonizing, this story has value as a framework for examining problems in educational research, for perspective has powerful impact on our enterprise and on the criteria by which we judge its value. Unfortunately, many who engage in the enterprise do so for pragmatic and personal reasons having more to do with their own vitae or political purposes than with the ultimate goal of enlightenment. Others attempt in good faith to contribute their efforts toward a larger goal, but still see their work primarily in terms of small increments which may or may not contribute meaningfully toward major enlightenment. Finally, there are some who hold the grand view, who may or may not see their dreams come to fruition, depending on a number of issues dealing with both design and methodology. Because certain problems pose constant threats to our best intentions and highest goals, it is necessary that we examine particular forms that they are likely to take in each area of research endeavor, including the area of adult education. This paper will examine factors which seem to pose special dangers to work within this area.

For present purposes, these factors seem to fall in five major categories: paradigm, design, instrumentation, data, and constraints. Each of these possesses the potential to disrupt seriously the kinds of efforts which must be mounted if we are to establish a satisfactory research base for practitioners. In order to illustrate the nature of the problems encountered, examples will be constructed around the ABE task presented by the presence of 20 million or more functionally illiterate adults among the citizens of our country, but it should be noted that very similar examples could be developed around other problem areas within adult education. This one represents such a huge task, however, in terms of both numbers of subjects and urgency of the problem, that it will serve especially well in the present context.

Considering first the matter of paradigm, one immediately encounters significant sources of trouble in educational research. Pohland (1976) addressed the "model muddle" in terms of the low paradigm notion advanced by Kuhn, citing the lack of symbolic generalization, shared beliefs and values, and cumulative body of research as evidence that education is not a mature discipline. He noted that significant advance in any field is dependent upon the cumulative contributions of scholars in that field and that "the absence of a research base leaves practitioners without guidance in determining which models produce which effects under which conditions" (Pohland, p.9).

One source of uncertainty about paradigm has been the long-standing controversy between adherents of "quantitative" and "qualitative" methods (Smith, 1983). Despite numerous attempts to reconcile the two points of view (Rist, 1977; Miles and Huberman, 1984), there remain significant epistemological as well as procedural differences (Smith and Heshusius, 1986). Even more significant, for present purposes, are inherent limitations within each of the methodologies which have seriously restricted understanding of complex educational phenomena.

The quantitative paradigm which has dominated educational research for so many years has come under increasing criticism on a number of counts which are relevant to this discussion. Most significant, perhaps, has been the charge that its failure to contextualize findings and to account for interactions of the kind that occur in the real world severely limits its value for practitioners (Eisner, 1984). Macmillan and Garrison (1984) cite an analogy developed by Byrne between researchers analyzing the behaviors of teachers in the attempt to understand student outcomes and researchers determining the frequencies with which various pieces on a chess board are moved in an attempt to determine differences between strong and weak players. In both cases, very little understanding would be gained of the many interacting factors which are the heart of the processes of interest. These authors view the matter as an extension of the fact that "Correlations do not provide an explanation of the observations they summarize, but only descriptions of the phenomena that need causal explanation" (Macmillan and Garrison, p.19).

Equally serious criticisms are levelled against researchers working in the qualitative tradition, where matters equivalent to reliability and validity can never achieve satisfactory resolution. As Smith and Heshusius (1986) note, "Validity is best thought of as an 'honorific' conferred on one explanation, from among others, with which one agrees." While this may satisfy those working within the tradition, it is very unlikely to be widely accepted by those planning or funding programs to deal with large numbers of people. Even if one accepts the counter-criticism which often is aimed at quantitative research by persons within qualitative ranks, to the effect that much attention to reliability and precision only disguises similar problems in objective research methods, it seems evident that such private truths will not suffice for program development. That is not to say that greater validity is actually achieved within the quantitative methodological camp, but only to recognize that empirical procedures which attempt to address matters of reliability and validity on the basis of some degree of public consensus are likely to receive greater acceptance.

With reference to the problems involved in determining the educational needs of large numbers of functionally illiterate adults, it is clear that paradigm limitations would constitute significant difficulties. It is well known that several different patterns characterize the manifold interactions of factors contributing to illiteracy including, but not limited to, such matters as cultural differences, home language other than English, socioeconomic status, gender, various learning disabilities, quality of schooling available near one's home, family adjustment, and changing aspirations at different stages of life. Many of these contributing factors also interact in varying ways with the reactions of adults to different kinds of programs designed to help them overcome their handicaps. It is clear that grouped data will not provide the kinds of insights that will be required in order to address these complex interactions effectively. However, it is equally clear that the magnitude of the task involved in obtaining representative samplings of the many kinds of individual patterns found in these interactions through qualitative means would be staggering.

Clearly, these paradigm-related issues lead directly into considerations of design, for the relative strengths and weaknesses of the two approaches interact strongly with design features. Cronbach (1975) described a problem in psychological research which also applies to educational research.

The experimental strategy dominant in psychology since 1950 has only limited ability to detect interactions. Typically, the investigator delimits the range of situations considered in his research program by fixing many aspects of the conditions under which the subject is observed. The interactions of any fixed aspect are thereby concealed, being pulled into the main effect or into the interactions of other variables. The concealed interaction may even wipe out a real main effect of the variable that chiefly concerns the investigator.

Cronbach and Snow (1975) examined the problem in terms of the large sample sizes which are required to analyze interactions effectively.

The investigator who employs a factorial design can detect some interactions of those conditions he allows to vary, but sizeable interactions are likely to be suppressed, just because any interaction that does not produce a significant F ratio is treated as nonexistent. Unfortunately, enormous volumes of data are required to pin down higher interactions as significant, unless one is guided by strong prior knowledge. When the facets of the design have more than two levels, the sample size required for establishing complex interactions, at least in instructional research, becomes prohibitive.

Certainly conditions have improved since these observations were made, in terms of both broadened understanding of appropriate statistical procedures and widespread access to computers with the capacities required to use them, but such improvements relate largely to potentials rather than actual practices. Because of the limited scope of projects which can be undertaken by individual researchers which, in turn, is related to reduced funding and institutional cut-backs, it remains true that most projects do not

involve the large sample sizes required for adequate analysis of higher-order interactions of the kind that are likely to be important for planning attacks on adult education problems.

These same limitations apply, of course, in the qualitative research tradition, though they take quite different form. Interacting factors can be studied in depth in the individual cases chosen for detailed analysis, but the limited number of such cases that feasibly can be examined limits the extension of findings to the broader population.

Such observations suggest syntheses that might help to circumvent some of the limitations and maximize the potentials of the differing approaches. Perhaps consortiums could be developed to share data obtained from adults at various sites around the country, using instruments and procedures worked out by a centralized coordinating body. The huge volumes of data thus generated could be collected and subjected to sophisticated analyses in order to harvest the best insights available through quantitative methodologies. These findings then could be used to determine how qualitative research methods might be applied to uncover deeper-lying individual dynamics in the complex patterns of illiteracy.

The choice (or development) and proper application of adequate instruments constitute significant concerns in educational research, for the quality of data obtained depends directly on instrumentation whenever psychometric techniques are involved. Arguments about psychometrics have occupied the literature so frequently during recent years that it seems unnecessary to reproduce arguments about testing in research. However, it seems appropriate to note that an instrument with a reliability of .7, not uncommon in measurement of complex and unstructured variables, accounts for only half of the variance found in resultant scores. The other half must be presumed to be error variance due to lack of measurement precision. That situation, of course, places a lid on validity estimates, leaving the value of the entire enterprise in doubt.

The problem takes different form in the case of qualitative research, where the researcher is considered to be the "instrument," with validity and reliability depending on the quality of the researcher's observations. Obviously, such quality will vary with the skills of the individual and the degree to which that person's opportunities to observe are optimized. The theoretical limit of perfect (1.0) reliability and validity would apply only with perfect observers enjoying perfect conditions, which would never occur. At the other extreme, 0.0 reliability and validity would occur only if a psychotic individual, totally out of touch with reality, were conducting the research, or if conditions were such that observers were unable to make any sense of their observations. Presumably that also would be a rare occurrence. Between these two theoretical extremes, some unknown level of congruence exists between events that are occurring and researchers' reports of such events. (It is important to note that Smith and Heshusius [1986], among others, contend that such a view of the matter is inappropriate, given the hermeneutical nature of qualitative research, but that would seem to be a difficult position to defend in a situation where one must coordinate the activities of many individuals and enlist support for programs.)

Assuming, for present purposes, that reliability and validity remain useful constructs in qualitative research even though they can not be estimated by usual means, it seems evident that attention must be given to the

matter of instrumentation in the qualitative as well as the quantitative tradition. In the qualitative approach that would seem to imply very careful training of researchers in order to improve the quality of their observations to the highest possible level, for there is no convenient way to check the data they generate. That is a sobering thought for anyone who has experienced the difficulty involved in maintaining reliable scoring of essay tests, for example, where the phenomena being observed remain stable and the variables of interest can be specified, and yet the same observer may have difficulty maintaining test-retest reliability above .7 with blind scoring and significant intervening periods of time. Qualitative researchers observing complex phenomena under emerging conditions surely would experience even greater difficulties, so it is clear that the task of obtaining trustworthy data about problems in adult education will be very difficult within both traditions. It is equally clear that trustworthy data will be required if successful efforts to deal with the massive problem of illiteracy are to be established.

These considerations cover much of the concern about data as well as instrumentation, but brief mention of the nature of data to be obtained seems necessary. Surely it will need to include quantitative elements obtained psychometrically in order to document the nature and scope of the problem, but it also will need to include insights about the needs, wishes, hopes and fears of affected adults which can be obtained only by intensive qualitative studies of many different individuals

Turning now to the matter of constraints, the last of the five areas to be addressed, it is obvious once again that certain concerns overlap matters already discussed. As noted in the discussion of design, there are realistic constraints such as time and money which limit the number of subjects who can be studied, especially in the qualitative mode. On the other hand, there are constraints on the kinds of analyses that can be conducted with limited numbers of subjects. The range and quality of instruments available limits assessment of certain potentially vital issues. Professional, ethical, and legal constraints also limit access to certain kinds of data which would be very useful in answering some kinds of questions. The massive structure of guidelines and regulations that accompany research with human subjects, to say nothing of funding programs, provide their own kinds of limitations.

In addition to realistic limitation imposed by factors of this nature, there are a number of constraints which arise because of the context in which educational research is conducted. For example, few educators are given released time for research, so such activities must be conducted in addition to full loads. The individual who wishes to become more involved in research usually faces the need to buy released time through external funding, in which case the individual must accommodate the goals and views of the funding agency. Anyone involved with that knows that it is trendy business, influenced greatly by political pressures, social expedients, and various kinds of current enthusiasms. It is very difficult in such circumstances to develop coherent theory or to follow the dictates of one's academic convictions. This leaves the researcher in the difficult position of choosing between the limitations imposed by the small scale of studies which can be done in addition to other full-time responsibilities, or the limitations encountered through the process of obtaining funding.

It seems evident that "publish or perish" as the dictum which motivates research activities needs to give way to more organized efforts to foster educational research. Surely much of the softness and molecularity which is found in so many areas is due to the scope of projects which an individual educator, burdened with other tasks, is able to undertake. A large number of small cross-sectional studies of isolated variables can not take the place of a few well-executed longitudinal or experimental studies with sufficient subjects and variables to examine complex interactions and long-term effects. The advent of multivariate techniques and large-capacity computers provide limited advantage with weak designs and small scope, for the complexities of pressing problems defy such attempts. The same principle applies in qualitative research, although for slightly different reasons. We face a situation in which large perspective must be supported with the kinds of resources and conditions in which grand visions can be brought to fruition.

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Qualitative Research and Adult Education

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Abstract: This paper discusses three critical features of qualitative research, argues that it should be the preferred mode of inquiry in adult education, and identifies potentially promising areas of research.

Two contentions shape this paper. The first is that educational research does more than investigate educational issues; rather, research has the potential to strongly influence educational policy and practice. We do not plan to develop or defend this contention; we simply point to the work of James Coleman and others in the "Equality of Educational Opportunity Study" (1966), and the research of such scholars as Murray Levine (1976) and Frank Besag (1981).

The second contention is that qualitative research, especially that rooted in the phenomenological or "semiotic paradigm" (Sanday, 1979) with its emphasis upon "verstehen" (Stake, 1978; Smith, 1983) is uniquely appropriate for research into adult education. We take this stance despite the claim that the magnitude of the task facing adult education precludes the use of labor intensive, small group focused, phenomenologically oriented research.

Support for our second contention is provided in part as follows. In "A Perspective on Adult Education Research," Long (1980) writes:

...[I]n seeking to answer questions about adulthood, we cannot just shift labor and research instruments from a child population to an adult population. The ways in which adults differ from children, the conditions under which the study of adults is usually conducted, and the character of the field in which the researcher is working...all make research on adulthood subtly unique. For one thing, researchers concerned with adult behavior...frequently have some kind of relationship with the individual from whom data are collected. In addition, the questions investigated...are usually embedded in a complex content. And the variables one wants to examine are often particularly difficult to isolate and observe in adult research (p.2).

Writing in the same volume, Darkenwald says, "If the subject matter of the field is the process of adult education, then the actual behavior of students, teachers, and administrators and their interpretations of their experience are

of central importance for developing theory and upgrading practice (1980, p.69; emphasis added). It is precisely the set of research issues identified by these two authors which constitute the strengths of qualitative research.

Smith (1983) has organized the issues raised by Long and Darkenwald around three central themes: 1) the relationship of the investigator to what is investigated; 2) the relationship of facts and values in the process of investigation; and 3) the goal of investigation. Each will be discussed briefly in order to provide a common frame of reference for discussion.

Central to the relationship of the investigator to the investigated are a set of ontological and epistemological premises. For the qualitative researcher (idealist, phenomenologist) the fundamental ontological stance is that being (reality, what is) is mind-dependent. Expressed in the language system of symbolic interactionism, reality is constructed in and by the mind of the actor through multiple "self-indications," a process by which the actor "notes things, assesses them, gives them meaning, and decides to act on the basis of the meaning" (Blumer, 1962, p. 183). From this perspective it necessarily follows that 1) the relationship of investigator to investigated is subject-subject rather than subject-object; 2) that the investigation is context-specific and context-dependent; 3) that that language of reportage must be the language of everyday life; 4) that "to catch the process" of self-indication the investigator must "take the role of the acting unit" (Blumer, p.188); 5) that reality fails to exist prior to investigation and ceases to exist when interest wanes (Smith, 1983, p.9); and 6) that scientific truth is either a matter of coherence (conceptual idealism) or socially and historically conditioned agreement (ontological idealism). All this is heady and arguable stuff!

For the idealist, the relationship between facts and values, Smith's second organizing topic, is founded upon the assumption that human beings, the subjects of social research, are moral beings acting on the basis of their own values and self-interests. Thus facts and values become inseparable and values indeed may determine for that actor what is to the counted as fact. Accordingly, values become integral to the research process, and the entire research process itself is meaningful only to the extent that it has a value base. All of this calls into question what Carlson (1980) has called "that wet noodle called objectivity" (p. 47). More elegantly, the symbolic interactionist stance toward research objectivity has been stated thus by Blumer (1962):

To try to catch the interpretive process by remaining aloof as a so-called "objective" observer and refusing to take the role of the acting unit is to risk the worst kind of subjectivism -- the objective observer is likely to fill in the process of interpretation with his

own surmises in place of catching the process as it occurs in the experience of the acting unit which uses it. (p. 188).

Again, heady stuff with which most quantitative researchers would violently disagree.

Finally, a few words about the goals of investigation. For qualitative researchers at large the goal since the days of Wilhelm Dilthey and Max Weber has been "verstehen," i.e., a holistic, hermeneutically devised, empathetic, inductive, emic, interpretive understanding of the what and why of human behavior. No presumption is made about the generation of causal laws, although qualitativists of the Glaser and Strauss (1967) persuasion argue for the "discovery of grounded theory." But whatever the particular stance toward qualitative research, "verstehen" constitutes the crux of the research effort.

Ultimately, the use of qualitative research in the field of adult education should confront those questions to which, at the present time, there are no definite answers. The most difficult and interesting questions about themes of adult learning, development, and motivation have yet to be answered. Our comprehension of them can be enriched through the qualitative approach. We have, through the use of various statistical manipulations, concretized such phenomena as life stages, relationships, parenting and mentoring, and motivational and participation patterns of adults. What is needed according to Collins (1981) are qualitative approaches to disturb our taken-for-granted acceptance of these operational definitions and to raise questions about the validity of their embodiment within the adult education enterprise. The temporary suspension of taken-for-granted assumptions, combined with careful analysis, can undermine instances of "misplaced concreteness" which characterizes some of our regularly deployed concepts. This, in turn, will unearth fresh dimensions, new questions, and neglected data for qualitative as well as quantitative investigations (Collins, p. 22). Through the use of qualitative investigations we can derive a clearer and more in-depth understanding of the field of adult education.

If qualitative research is uniquely appropriate for the field of adult education, then what are the areas within the field that would best be explored by this type of investigation? Literature in the field suggests the following:

1. Investigations that focus on the nature of adulthood:
 - a.) What impact do various relationships (such as mentoring and parenting) have on adults?
 - b.) In what ways does career development affect adults?
 - c.) What impact do childhood experiences have on adults?
2. Investigations that focus on adults as learners:
 - a.) What are the learning styles that adults bring with them to educational environments?
 - b.) What are the environmental factors that influence learning?

ELECTRONIC NETWORKING AND THE ADULT EDUCATION RESEARCHER

Roger Hiemstra
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ABSTRACT

Syracuse University has developed AEDNET, an electronic network for adult educators. This network facilitates scholarly activities and provides a variety of opportunities for researchers to exchange information.

AEDNET - A SINGLE DISCIPLINE NETWORK

Adult education is growing as a discipline and yet it is still fairly small in number of professionals. Perhaps no more than 15-20,000 professionals make a full-time living with adult education positions. The Kellogg Foundation of Battle Creek, Michigan, has recently awarded funds to Syracuse University for the dissemination of adult education information to such people. A portion of these monies are being used to develop an electronic network, AEDNET, for purposes of linking adult education professionals in a multitude of ways. This network will facilitate scholarly activities and provide a variety of opportunities for researchers to exchange information.

THE POSTER SESSION

This poster session will describe and demonstrate how such a network will provide several electronic features: (a) Bulletin board system for researchers and practitioners to post research questions, news about conferences, and various other types of information, (b) electronic mail and message exchange, (c) interactive conferencing on questions and problems important to the field, (d) access to information about adult education resources and archival material at Syracuse University, (e) connections with research tools, (f) exchange of drafts of co-authored material, and (g) special interest groups for electronic information dissemination.

The session is interactive in that it provides an opportunity for participants to become acquainted with operation of the system. A combination of posters, overhead projector transparencies, slides, and discussions with the presenters will describe the network, how it is being used, how participants may sign on and use it, and future developmental plans. The presentation also will include an on-line demonstration of the network and several of its features. Each participant will be provided with an instructional packet designed to help with back-home use of the network. A sharing of related experiences and future needs that AEDNET might meet will be encouraged.

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Poster Presentation

Selected Demographic Factors as Potential Indicators of
Persistence of Adult Community College Students

Literature on higher education is replete with studies of student retention, persistence, stop-out and drop-out. Frequently these studies focus on freshman and sophomores in the eighteen (18) to twenty (20) year age range, and continuation in higher education has been found to be associated with social factors, academic factors or both. Social factors include variables such as participation in dormitory, sorority or fraternity activities; participation in college athletics; or satisfaction with the availability of persons to date. Academic variables frequently appearing in the literature include high school GPA, graduating class ranking, and ACT or SAT scores.

The traditional areas of examination have little relevance to the typical community college student today who is thirty (30) years old, married, working full time to support a spouse and dependent children, and paying for education from his/her paycheck. In many instances, these students have not completed high school. Research pertaining to persistence of the adult community college student is virtually non-existent.

Jerome Kagan (1985), based on his many years of research in child cognitive and personality development, suggested much of what we are and who we become as adults is determined by chance. How successful we will be in our endeavors in education and in life is affected by factors such as birth order, the size of the community in which we grew up, and the size of the schools we attended.

The purpose of this study is to determine if correlations exist among adult community college students' success in completing coursework and birth order, size of high school attended, size of home town, ages of dependent children in the household, frequency of employment change, sex, age, economic status and/or marital status. The study will involve surveying five hundred (500) community college students over the age of twenty-five (25) years who are enrolled in the beginning course of an immediate job entry associate degree program. In this longitudinal study, data from the survey will be compared with the percentage of coursework successfully completed with checkpoints occurring at the conclusion of sixteen (16) weeks of instruction, thirty-two (32) weeks, and two (2) years. Identification of such demographic factors affecting persistence of adult community college students will provide a basis for counseling and advisement which may increase the students' opportunities of success.

- c.) What are the methodological considerations that need to be taken into consideration in the learning environment?
- 3. Investigations that focus on the area of educational gerontology:
 - a.) How do the oldest old (82 and above) view the society?
 - b.) What are the long range effects of public policies on aging?
 - c.) What are the characteristics of the programs that are developed for this client group?

With the investigation of some of these areas should come a better conceptualization of the field of adult education. Intellectual curiosity should motivate our research and help formulate our research questions. But as Rachal has noted "...[F]or the research to have true merit, not only must the question be important, but the execution must be as well. Poor design can no more answer a good question than excellence of design can rescue one that is banal" (p. 159.).

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